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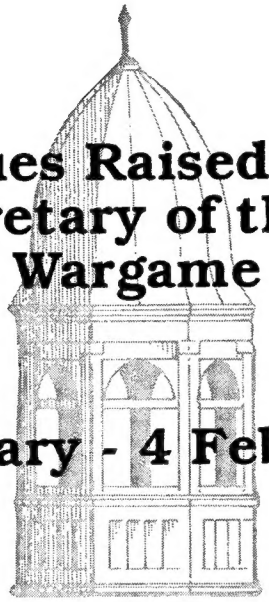
Warfare Studies**

# Issues Raised in The Secretary of the Navy Wargame 94



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This memorandum summarizes the main themes and issues discussed during the Secretary of the Navy Wargame 94. The game focused on the complementarity between the Department of the Navy's white Paper, . . . *From the Sea*, and programmed force structure.

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ISSUES RAISED IN THE SECRETARY OF THE NAVY WARGAME 94

This is the fourth POM-related game associated with "... From the Sea," the Naval Service's white paper released in the Fall of 1992. This is also the fourth associated "quicklook" report issued by the Center for Naval Warfare studies. These reports have provided a broad overview of game results and issues discussed.

The Center for Naval Warfare Studies has been pleased to participate both in the development of "... From the Sea" and in this game series. As the importance of these games has increased, so has flag-level participation which has nearly doubled since the first game. Also of note is the participation of other services. For this game, the Navy and Marine Corps invited major generals from both the Army and Air Force to sit in on the Executive Session and provide their views. This development is another indicator of how naval thinking is adopting to changing circumstances. This report summarizes the state of that thinking on programmatic issues.

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## EXECUTIVE SUMMARY

The objective of this quicklook report is to highlight the issues raised during **SECNAV Wargame 94** conducted from 31 January to 4 February 1994 at the Marine Corps Combat Development Command, Quantico, VA. **SECNAV Wargame 94** is the latest in a series of war games aimed at evaluating programmed capabilities against concepts put forth in the Naval Service's white paper "... From the Sea." **SECNAV Wargame 94** was specifically developed to assist in the formulation of FY96-01 Navy Program. The Navy and Marine Corps force structure used during **SECNAV Wargame 94** was based on the proposed force contained in the Bottom-Up Review as modified by Resource Allocation Display VII (see Table 1).

The focus of the game was on challenges faced during two nearly simultaneous major regional contingencies. The two scenarios used (Korea and Persian Gulf) were drawn from Defense Planning Guidance (DPG) and set in 2003 using 2013 threat forces in order to hedge against the possibility technological breakthroughs. The first contingency resulted from a culmination of events which induced an economically desparate, politically isolated, and militarily stagnating North Korea to attack the South in what it saw as a "now or never" attempt to save the regime. Iraq, unhappy with its oil revenues and still smarting from its Gulf War defeat, decided to take advantage of America's preoccupation with Korea to once again move south--this time into the oil fields of both Kuwait and Saudi Arabia. Each contingency was conducted in the four phases discussed in the Bottom-Up Review: Phase I, halt the invasion; Phase II, build up U.S. combat power in the theater while reducing the enemy's; Phase III, decisively defeat the enemy; and Phase IV, provide for post-war stability.

Game players were separated into four working groups corresponding to the four key operational capabilities identified in "... From the Sea," namely: command, control and surveillance; battlespace dominance; power projection; and force sustainment. After receiving CJTF guidance, working groups deliberated separately and reported out at the end of each phase. At the conclusion of game play, issues were briefed to a three-star Navy and Marine Corps panel which further refined them for presentation to an Executive Panel chaired by the Secretary of the Navy and attended by the Chief of Naval Operations, and the Commandant of the Marine Corps, the Assistant Secretary of the Navy for Research, Development and Acquisition, and the Department of the Navy Counsel General.

One theme which wove its way through the game was that providing adequate forces in a timely manner to a second crisis is extremely difficult. Participants concluded that the DPG time lines provided for this game (see Appendix C) were too optimistic--primarily because of lift requirements for swing forces. There was

a feeling that reliance on swing forces would leave the Joint Task Force Commander in the second crisis without sufficient forces to execute his strategy since there would be a natural reluctance for the first contingency commander to release forces from under his command even if those forces are needed elsewhere--especially if he is involved in an intense firefight himself. Working group members noted that there are shortfalls in both national- and theater-level surveillance assets necessary to successfully prosecute two nearly simultaneous contingencies. Players were also concerned that without a deliberate weapons allocation policy, available Tomahawks, precision-guided munitions, and theater ballistic defense missiles would nearly all be expended in the first contingency. All this is not to say that two contingencies cannot be fought and won. The consensus was that more analysis needs to be completed to determine how "nearly simultaneous" contingencies can be in order for the commander in the second crisis to have forces reliably available to execute his campaign.

In addition to the lift issue mentioned above, Navy issues which received the most attention were: the availability of ships capable of providing theater ballistic missile defense; the availability of mine countermeasure assets; maintaining a sufficiently large force structure base to support both forward presence operations and contingencies; decontamination capabilities for logistics nodes; obtaining a proper weapons inventory balance, and procuring follow-on carrier strike aircraft.

The primary Marine Corps issues included: acquisition of the Advanced Amphibious Assault Vehicle; procurement of a medium lift replacement aircraft; supplementing Maritime Prepositioning Force sets with an additional ship to carry Expeditionary Air Field matting, battle tanks, and sustainment material; and improved Naval Surface Fire Support.

Although joint and coalition force capabilities were not stressed during the game play, participants did emphasize the absolute necessity of ensuring connectivity and interoperability with them. Recommendations included building new systems to common standards, developing common data bases and mission planning systems, and continuing to develop joint weapons. During the Executive Panel session, both the Army and Air Force were represented by major generals who provided their Services' perspectives.

In closing, the Executive Panel recommended that different games be planned which provide for continued interactive play and the opportunity to help develop new and innovative concepts to meet tomorrow's challenges.

# I. INTRODUCTION

## Background

The **1994 Secretary of the Navy (SECNAV) Wargame** was conducted from 31 January to 4 February 1994 at the Marine Corps Combat Development Command (MCCDC), Quantico, Virginia. It was the fourth in a series of wargames jointly sponsored by the Office of the Chief of Naval Operations (N8, N3/5), the Commanding General, MCCDC, and Headquarters Marine Corps (Deputy Chief of Staff for Plans, Policy and Operations). The intent of the series is to facilitate integrated development of total Naval Force Capabilities consistent both with Defense Planning Guidance (DPG) and operational concepts articulated in the "... From the Sea" White Paper. Principal participants included flag and general officers from the naval services, other services, senior Department of the Navy civilians, and congressional staff members. The Executive Session on 4 February was chaired by the Secretary of the Navy, and attended by the Chief of Naval Operations and Commandant of the Marine Corps as well as by the Assistant Secretary of the Navy for Research, Devlopment and Acquisition, and the Department of the Navy General Counsel.

The purpose of the game was to assess operational concepts and capabilities found in "... From the Sea" using Fiscal Years 1995-1999 (FY 95-99) programmed force in a 2003 scenario (see Table 1), to identify and prioritize critical issues affecting key operational capabilities, and to examine any necessary adjustments to the programmed force. More specific objectives included developing and refining program issues emanating from the Joint Mission Area (JMA) process and other related wargames, as well as their implications for Program Objective Memorandum (POM) 96 issues, familiarizing naval leadership with key POM issues early in the process, and defining the direction for new initiatives.

In order to assist participants in identifying and discussing issues, game sponsors provided them with a Summary of Top Issues (see Appendix A). The list was distilled from Joint Mission Area and Support Area (SA) assessments and other related wargames/seminars held prior to the game and reviewed by Fleet Commanders (Atlantic, Europe and Pacific), Headquarters Marine Corps, Marine Corps Combat Development Command, and Commander, U.S. Central Command (Rear) and the Chief of Naval Operations staff (OPNAV). This procedure was not intended to close discussion or limit debate on other issues but to ensure that issues of interest to the fleet/force were fully vetted.

| Bottom-up Review | Resource Allocation Display VII |
|---|---|
| Navy<br><br>• 11+1 carriers (CV/CVN)<br>• 10+1 carrier air wings (CVW)<br>• 18 Trident ballistic missile submarines (SSBN)<br>• 45-55 attack submarines (SSN)<br>• 346 ships by 1999<br><br>Marine Corps<br><br>• 5 active brigades<br>• 1 reserve division<br>• Endstrength<br>- 174,000 active<br>- 42,000 reserve | Navy<br><br>• 11+1 carriers<br>• 10+1 carrier airwings<br>• 18 Trident ballistic missile submarines<br>• 55 attack submarines<br>• 331 battle force ships<br><br>Marine Corps<br><br>• Not affected |

Table 1. Navy & Marine Corps Force Structure Plans

Game sponsors underscored the fact that the thrust of the game was to raise issues, identify program shortfalls and highlight threat/capability mismatches rather than to focus on warfighting tactics. The game was structured in a seminar format, with three days of deliberations focused at the one- and two-star level followed by a one day three-star review session and a one day Executive Session for the Secretary of the Navy. The game focus (i.e., programmatics) coupled with dramatic reductions in defense funding has increased interest in this game series[1] as program sponsors and end-item users (i.e., the fleet/force) seek to defend programs and influence acquisition decisions. This interest is demonstrated by increased flag officer participation (Appendix B contains a list of flag-level participants).

[1] See also Issues Raised in the Secretary of the Navy Strategy-POM Game 93 (Research Memorandum 5-92); Issues Raised in Wargame 2001 (Research Memorandum 1-93); and Issues Raised in the Secretary of the Navy Wargame 93 (Research Memorandum 4-93), produced by the Strategic Research Department, Center for Naval Warfare Studies, Naval War College.

## II. GAME SCENARIOS

In line with current planning and assessment guidance, **SECNAV Wargame 94** examined dual, nearly simultaneous, major regional contingency (MRC) scenarios--one in Northeast Asia (with North Korea (DPRK) as the aggressor) and the other in Southwest Asia (with Iraq as the aggressor).

Since the primary purpose of the game was to challenge programmed systems in combat, the scenarios were constructed with that in mind. Although the scenarios were set in 2003, threat forces were assumed to possess 2013 capabilities as a hedge against technological breakthroughs. This was consistent with earlier games and the JMA seminars. Drawn from Defense Planning Guidance, they were intended to provide realistic backdrops for analysis and were not meant to be predictive. Joint Service and coalition contributions were recognized as being essential but issue discussions generally did not focus on their capabilities. The extremely compressed time line necessary to force events to move quickly enough so that two crises could develop and be discussed limited discussions for each issue to about 30 minutes during working group periods. However, unlike preceding games, each issue was briefed by pre-identified subject matter experts which greatly facilitated the ensuing cell debate. Nevertheless, this compressed timeframe meant that the working groups had to simultaneously discuss issues and develop briefing slides.

### MRC West (Northeast Asia)

In 2003, the Koreas had yet to unify and North Korea had become increasingly unstable as its economic woes deepened and social unrest spread. Paralyzed by their belief that conflict with the South was inevitable, DPRK leadership consumed scarce resources in a continued arms build up--resources which could have been used to alleviate their economic and social challenges. This shortsighted policy ultimately led to stagnation of military capabilities as the North Korean economy found itself less able to divert funds from essential social services. At the same time, South Korea (ROK) was able to improve its own military capabilities and significantly reduce the gap in ground offensive capabilities with the North. Realizing that any window of opportunity they may have enjoyed was rapidly closing, North Korean leadership opted for a "now or never" offensive against the South. Their hope was that the offensive would result in a decisive victory which in turn would rally national fervor and place them in a stronger position from which to deal with increasing international pressure.

Several assumptions (developed by a joint service working group) were made in order to limit scenario debate and bound

discussion:

1. The United Nations will pass a resolution condemning DPRK actions and supporting ROK and U.S. efforts to counter the North.

2. There will be no escalation of the conflict out of region.

3. Regional and allied nations' facilities will be available and open for logistic support. Japan makes logistic/military facilities and capabilities available for coalition forces including airfields for combat operations.

4. U.S. and ROK forces will conduct military operations under the operational control (OPCON) of Commander in Chief, United Nations Command/Combined Forces Command (CINCUNC/CFC) who will also act as the Joint Task Force Commander (CJTF).

5. Neither the Peoples' Republic of China nor Russia will provide support to the DPRK.

6. Use of nuclear weapons is unlikely unless DPRK national survival is placed in jeopardy. However, the use of chemicals, especially non-persistent agents, will be used to support offensive operations.

7. Deployed (forward presence) forces are inadequate to deter the DPRK invasion.

8. Extensive coastal and random deep water mining will be conducted by the DPRK prior initiation of hostilities.

The assumption which provoked the most comment was Japan's acquiescence to opening its bases for combat operations. In a stroke, this assumption assured that the weight of the air battle from the very beginning could be carried by Air Force assets. Had Japan denied access to coalition forces for combat operations (a situation many naval participants felt more likely than the game assumption), reliance on naval air (including the establishment of Expeditionary Air Fields (EAF) in South Korea) would have better stressed the enabling mission of naval forces. If Japan had further denied support bases to the U.S., sustainment would have been dramatically affected since commercial shipping was required to bring supplies into theater where they were then transferred to combat logistic forces (CLF) for further dissemination in the theater. However, in order to ensure the

commitment of forces was in accordance with DPG time lines, neither of these assumptions was played.

Mission. The designated objectives for this scenario were to restore the borders of the ROK, destroy North Korea's offensive military capability, and eliminate or suppress the enemy's ability to employ theater ballistic missiles (TMB) and weapons of mass destruction (WMD).[2]

Commander's Guidance/Concept of Operations. CINCUNC directed his forces to rapidly deploy to bolster ROK defenses and employ in a defensive posture with the objective of halting the DPRK advance until reinforcements arrived. As reinforcements were emplaced, forces maintained a strategic defensive posture while conducting offensive tactical operations aimed at disrupting DPRK forces. Once all forces were in place, offensive operations were conducted to restore ROK borders, isolate and destroy attacking DPRK forces, disrupt enemy command and control, and ultimately to destroy DPRK offensive capability.

Following the commander's guidance, the concept of operations followed the four phases of combat identified in the Bottom-Up Review, namely: Phase I, halt the invasion; Phase II, build up U.S. combat power in the theater while reducing the enemy's; Phase III, decisively defeat the enemy; and Phase IV, provide for post-war stability. During Phase I, a build up of coalition forces was mounted, theater ballistic missile defenses (TBMD) were established for ports, airfields and other vital areas in order to facilitate reinforcement. Phase II continued the build up and coalition air attacks against DPRK forces, national infrastructure, and command and control ($C^2$) capability. Phase III pursued the defeat of the DPRK, reestablished ROK borders and destroyed DPRK offensive capabilities. Phase IV included force withdrawal and establishment of a presence force to monitor the peace.

Phase I. Halting the DPRK offensive as far forward as possible was the primary objective of this phase. In-place and early arrival forces were also required to prepare theater airfields and ports for the introduction of reinforcements and supplies. Table 2 lists Phase I objectives, U.S. forces required to achieve those objectives, and the primary concerns of the CINC.

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[2] Although nuclear, biological and chemical weapons are covered under the WMD rubric, participants recognized that each of these weapon types requires considerably different defenses and strategies to deal with them.

Unlike regional scenarios used in past Secretary of the Navy games, the CJTF in Korea was already established in theater and on land prior to the breakout of hostilities. Thus, discussions concerning requirements for supporting a Joint Task Force Commander afloat were noticeably limited. Since it was suggested that the CJTF would probably have to evacuate his permanent headquarters in face of the DPRK advance, the main topic for discussion was the requirement to ensure connectivity between afloat forces and the temporary headquarters. There was some discussion about hosting a Joint Task Force Air Component Commander (JFACC) aboard ship while the CJTF was operating in his temporary headquarters.

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| **Objectives** | • Halt DPRK advance as far forward as possible<br>• Protect arriving forces and receiving facilities needed to support their arrival<br>• Establish TBMD at ports and airfields of arrival and allied strategic sites, where possible<br>• Establish air superiority over friendly territory and sea superiority along friendly coastlines |
| **Concerns** | • Surge flow of reinforcements<br>• Surveillance<br>• Mines<br>• Coastal missile batteries<br>• TBM/WMD threats<br>• Submarines<br>• Air defenses |
| **Minimum Requirements** | • 2 carrier battle groups<br>• Mine countermeasure forces<br>• 1 Marine Expeditionary Unit (Special Operations Capable) (MEU/SOC)<br>• 1 Maritime Prepositioning Force (MPF) set<br>• 1 Marine Air Wing (MAW)<br>• 5 Air Force Fighter Wings<br>• 60 Air Force bombers<br>• 1 Army Air Assault Division<br>• 2 Army Heavy Divisions |

Table 2. MRC West Phase I Objectives, Concerns & Requirements

Another challenge in the Korean scenario not faced in pre-

vious games was a submarine threat. The discussion concerning this threat lacked any real depth. Though not briefed, it was assumed that the North Koreans surged their submarines at the beginning of the offensive and intended to use them to disrupt plans to place TMBD-capable ships in position, to delay minesweeping efforts, and to hamper significantly the flow of personnel and equipment into theater. During the first plenum following Session One, consensus was reached that antisubmarine warfare (ASW) assets in the current program were sufficient and that enough ASW assets were available in theater to handle the aging DPRK submarine force. There was no significant discussion of ASW during the game.

An interesting discussion was conducted about the availability of carriers at the start of the game. The scenario called for the Japan-based carrier to be undergoing a maintenance period and not immediately available, with no other carriers nearer than the West Coast of the continental U.S. (CONUS). The Power Projection Working Group proceeded with their assessment on the belief they could deploy two carriers to the theater within 12 days. If carriers could not be made available that quickly, they concluded that naval air would not make a significant impact on the crisis. The nature of that impact (i.e., whether the weight of effort would be on close air support or attrition strikes) was not elaborated. The Marines noted, however, that they expected naval air to be available to support amphibious operations. Availability was also an issue with respect to mine countermeasure (MCM) forces. Several participants expressed the belief that U.S. assets will remain malpositioned if stationed in CONUS.

Phase II. Coalition forces continued to build during this phase while attrition strikes were conducted against DPRK positions in the ROK. Strikes were also conducted against supply lines and support infrastructure in North Korea. Table 3 identifies CJTF Phase II objectives, concerns and force requirements.

As air forces flowed into theater, an assessment of available airfields in Japan and Korea was made to determine if enough ramp space was available for the proposed influx of aircraft. That analysis concluded that establishment of an Expeditionary Air Field (EAF) in Korea could help alleviate crowded conditions elsewhere as well as improve sortie generation.

An assessment was also made concerning the numbers of theater ballistic missiles in theater and their potential employment. This analysis was aimed at determining the required numbers of TBMD-capable surface combatants and available weapons.

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| **Objectives** | • Isolate and neutralize advanced DPRK units<br>• Disrupt and dislocate logistic lines of communication<br>• Disrupt and destroy DPRK command and control agencies and nodes<br>• Destroy and defend against TBMs and WMD<br>• Protect key friendly infrastructure, including vital airfields and ports<br>• Expand air superiority over the peninsula and sea superiority adjacent to key enemy coastlines and follow-on amphibious assault areas |
| **Concerns** | • Continued flow of reinforcements<br>• Adequate forces (sortie generation)<br>• Mine clearance<br>• TBM, WMD, ASW, and small craft threats<br>• Surveillance/intelligence<br>• Sustainability |
| **Minimum Requirements** | • 4 carrier battle groups<br>• Mine countermeasure forces<br>• 1 Marine Expeditionary Force (MEF) ashore<br>• 1 MEF afloat<br>• 8 Air Force Fighter Wings<br>• 100 Air Force bombers<br>• 1 Army Air Assault Division<br>• 2 Army Heavy Divisions<br>• 1 Army Light Division |

Table 3. MRC West Phase II Objectives, Concerns & Requirements

During Phase II, National Command Authorities (NCA) recognized the possibility that another crisis could develop in Southwest Asia. This situation contributed to the decision to keep one MEF afloat (although there was some skepticism expressed about whether a CINC would intentionally withhold forces which could prove decisive in the current conflict based on the possibility that they might be needed elsewhere outside his theater). When the Iraqi attack against Kuwait and Saudi Arabia actually

did occur, further skepticism was noted about whether the CINC would relinquish forces under his command to the second MRC.

Phase III. Phase III commenced just days after the Iraqi attack occurred (see Appendix C for a Summary Scenario Time Line). As can be seen in Table 4, few U.S. forces are available for release to the second MRC.

Of the Air Force's thirteen active and seven reserve fighter wings, ten are committed in Korea. Of the Army's ten active and five-plus reserve divisions, six are committed. Fully half of the Navy's carriers and their escorts are committed and two of the Marines three expeditionary forces are involved. With the most intense phase of the Korean conflict underway, nothing short of full mobilization makes forces available for the Iraqi crisis.

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| **Objectives** | • Counter-attack, recapture ROK territory, relieve Seoul, and push DPRK forces back north of the DMZ<br>• Destroy advanced DPRK units<br>• Destroy logistic lines of communication<br>• Destroy command and control<br>• Destroy TBMs and WMD<br>• Protect key friendly infra-structure, including vital airfields and ports<br>• Maintain air and sea superiority over and around the peninsula |
| **Concerns** | • Sustainment<br>• Coalition integration<br>• Close air support (all wx)<br>• End state |
| **Minimum Requirements** | • 5 carrier battle groups<br>• Mine countermeasure forces<br>• 1 MEF ashore<br>• 1 MEF afloat<br>• 2 MAWs<br>• 10 Air Force Fighter Wings<br>• 100 Air Force bombers<br>• 1 Army Air Assault Division<br>• 3 Army Heavy Divisions<br>• 2 Army Light Division<br>• 1 Light Cavalry Regiment |

Table 4. MRC West Phase III Objectives, Concerns & Requirements

Phase IV. Whereas peace monitoring and force withdrawal have their own challenges under the best of conditions, with another crisis raging in the Persian Gulf, decisions concerning which forces to leave in place to monitor the peace in Korea, which forces to deploy to the Persian Gulf, and which forces, if any, to demobilize took on added dimensions for the CINC and NCA. Table 5 notes that no satisfactory solution was developed.

Attrition of forces, which were considered light by some, played a big role in what assets could be reconstituted and redeployed to the second MRC in Iraq. The Army took the greatest losses (an equivalent of a division) while the Marines lost use of an MPF set. Marine lift was further affected by the loss of one and damage of another amphibious ship. The Navy also lost 37 strike aircraft. The Air Force lost 83 strike aircraft and two bombers.

| | |
|---|---|
| **Objectives** | • Conduct peacekeeping operations<br>• Redeploy and reconstitute forces<br>• Ensure compliance with provisions of war termination agreements |
| **Concerns** | • Protection of force withdrawal/redeployment<br>• Turnover to peacekeepers<br>• Residual force levels |
| **Minimum Requirements** | • Not determined |

Table 5. MRC West Phase IV Objectives, Concerns & Requirements

**MRC East (Southwest Asia)**

Taking advantage of international displeasure with Iraq following the Gulf War, Iran began a military build up which threatened the balance of power in the Gulf. Iraq's increasingly cooperative behavior in the mid-1990s allowed the United Nations to relax sanctions against Iraq which permitted them to counter the Iranian military build up with a robust rearmament plan of their own. A rearmed and financially stable Iraq then once again began testing the limits of international tolerance as they attempted to enhance their own regional influence. Unable to influence the price of oil through the manipulation of production quotas, they began conducting a series of military exercises in southeast Iraq. The purpose of these exercises was to raise international doubt concerning their intentions and the security

of the Middle East oil supply (especially the reserves in Kuwait and Saudi Arabia). They believed that this uncertainty would translate into higher oil prices. Still harboring ill will towards its Gulf neighbors as a result of the Gulf War, Iraq also desired to regain the territory it lost as a result of that conflict. Iraq's expansionist aspirations, combined with its threatening posture, raised international fears that an imminent Iraqi move to the south would be made to take advantage of the United States' preoccupation with the crisis in Korea. Iraqi mobilization to the south was, in fact, followed by an attack into Kuwait and Saudi Arabia.

The following assumptions were used for this scenario:

1. Iran will be a neutral actor, providing, at most, passive support for Iraqi actions.

2. Israel will be a non-player during the course of the conflict.

3. A "Desert Storm" equivalent coalition will be developed under U.S. guidance and policy direction.

4. Chemicals will be used initially only against Gulf Cooperation Council (GCC) forces in the opening battles of the conflict.

5. Russia will follow the U.S. lead and a provide a small to medium contribution to the coalition.

6. The Strait of Hormuz will remain open throughout the conflict. Iraq has only the capacity to conduct harassing actions and low-level random mining in the Strait.

7. The probable rise in the price of oil will not affect the conduct of the war nor the development of the coalition.

8. There will be extensive mining of coastal water in the northern Persian Gulf and Iraq will conduct mining of Kuwaiti and Saudi ports as they are seized.

9. Iraq will use the same tactics in retreat as they did in Desert Storm and will attempt to destroy and burn Saudi and Kuwaiti oil fields.

10. Iraq will fight during their withdrawal from Saudi Arabia and Kuwait thus delaying the redeployment of U.S. forces.

11. Iraq will use weapons of mass destruction (chemicals) in defense.

12. Access to facilities for staging forces in GCC states will be permitted when Kuwait is invaded. Once available, airfields remain operable and available.

13. Iraqi military forces have returned to combat effectiveness.

The assumption which stirred the most discussion in this MRC was that a "Desert Storm" equivalent coalition could be developed in light of the probable late arrival of U.S. forces from the Korean conflict. As mentioned in the introduction, other governments are likely to join the U.S. in a coalition only if they feel they are safe in doing so (i.e., if the U.S. is capable of acting unilaterally). In this case, the ability of the U.S. to act unilaterally is very much in question until the Korean conflict is concluded.

Mission. The designated objectives for this scenario were to restore Saudi Arabian and Kuwaiti sovereignty and destroy all methods of Iraqi offensive capability.[3]

Commander's Guidance/Concept of Operations. Commander and Chief, U.S. Central Command (USCINCCENT) directed his forces to deter further Iraqi aggression, deter use of WMD, conduct intelligence and surveillance operations, restore Saudi Arabian and Kuwaiti sovereignty and political borders, destroy all methods of Iraqi offensive capability, maintain free access through the Strait of Hormuz, conduct excursion operations to deter and neutralize hostile actions of non-GCC aligned states, and conduct follow-on operations as directed by NCA.

Phase I. As mentioned above, the CINC had genuine concerns about America's ability to attract and keep coalition partners in the face of U.S. force delays into the theater. Of the required forces identified as necessary to achieve success during Phase I (see Table 6), arrival of the two MPF sets was the most problematic since one of the three sets was not able to be reconstituted as a result of the Korean conflict. Reconstituting and releasing an MPF set from Korea is also problematic since CINCUNC is likely to resist losing any forces during this timeframe.

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[3] Remembering that Iraq was allowed to re-arm to counter an Iranian attempt at hegemony in the region, this mission statement obviously requires a fine touch to ensure that long-term U.S. political objectives are met.

Countering the mining threat was easier in this scenario than in the Korean scenario since the U.S. already had some forces in place and coalition partners also had mine clearing capability. However, ensuring there was a safe environment in which the MCM assets could work did present a challenge. The Battlespace Dominance Working Group determined that sufficient TBMD-equipped surface combatants will be in the inventory to meet the requirements of both crises. The Power Projection Working Group, after receiving assurances that work on carriers in overhaul could and would be expedited, believed sufficient carriers would also be available.

| | |
|---|---|
| **Objectives** | • Halt the Iraqi advance as early as possible<br>• Protect arriving forces and receiving facilities needed to support their arrival<br>• Establish TBMD at ports and airfields of arrival and allied strategic sites<br>• Establish air superiority over friendly territory and sea superiority along friendly coastlines |
| **Concerns** | • Surge flow of reinforcements<br>• Adequacy of forces<br>• Coalition support<br>• Surveillance<br>• Mines<br>• Coastal missile batteries<br>• TBM/WMD threats<br>• Air defenses |
| **Minimum Requirements** | • 2 carrier battle groups<br>• Mine countermeasure forces<br>• 2 MEU (SOC)<br>• 2 MPF sets<br>• 1 MAW<br>• 5 Air Force Fighter Wings<br>• 30 Air Force bombers<br>• 2 Army Heavy Divisions (1 prepositioned Heavy Brigade Afloat) |

Table 6. MRC East Phase I Objectives, Concerns & Requirements

Phase II. Many game participants felt the DPG time lines used for the game was overly optimistic (see Appendix C).

According to the proposed time line, the Iraqi attack was halted in just four days allowing Phase II to commence. Table 7 provides Phase II objectives, concerns and force requirements.

| | |
|---|---|
| **Objectives** | • Isolate and neutralize advanced Iraqi units<br>• Disrupt and dislocate logistic lines of communication<br>• Disrupt and destroy $C^2$ agencies and nodes<br>• Destroy and defend against TBMs and WMD<br>• Protect key friendly infrastructure, including vital airfields and ports<br>• Expand air superiority over the northern and southern Iraq and sea superiority adjacent to key enemy coastlines and follow-on amphibious assault areas |
| **Concerns** | • Continued flow of reinforcements<br>• Adequate forces (sortie generation)<br>• Mine clearance<br>• TBM, WMD, and small craft threats<br>• Surveillance/intelligence<br>• Sustainability |
| **Minimum Requirements** | • 4 carrier battle groups<br>• Mine countermeasure forces<br>• 1 MEF ashore<br>• 1 MEF afloat<br>• 8 Air Force Fighter Wings<br>• 100 Air Force bombers<br>• 1 Army Calvary Division<br>• 3 Army Heavy Divisions |

Table 7. MRC East Phase II Objectives, Concerns & Requirements

Once again it was predicted that the most difficult of the required forces to get into theater would be the Marines. Phase II in Iraq started nearly a month before the fighting in Korea ended. Victory over Iraq is then secured just over a month after Korea surrenders. Although it was suggested that the Marines would fulfill their expeditionary role by withdrawing and leaving the battle in Korea to the Army, that supposition, it was pointed

out, has never happened. Historically, once in place, the Marines have always remained. Even if NCA decides to swing the Marines early, they would have to be reconstituted and redeployed long before the counter-offensive in Korea began--not a likely occurrence.

Phase III. The Phase III counter-offensive lasted only twenty days. Although this phase was scripted to begin 15 days after Korea surrendered, in reality its actual commencement would have been determined by the sufficiency of available coalition forces. Other concerns, force requirements and phase objectives are contained in Table 8.

| | |
|---|---|
| **Objectives** | • Encircle and destroy penetrating Iraqi forces in Kuwait and Saudi Arabia.<br>• Counter-attack and recapture oil fields with the least amount of damage<br>• Destroy advanced units<br>• Destroy logistic lines of communication<br>• Destroy command and control<br>• Destroy TBMs and WMD<br>• Protect key friendly infra structure, including vital airfields and ports<br>• Maintain air and sea superiority over and around southern Iraq, Kuwait and northern Saudi Arabia |
| **Concerns** | • Sufficiency of forces<br>• Sustainment<br>• Coalition integration<br>• Availability of selected weapons<br>• End state |
| **Minimum Requirements** | • 5 carrier battle groups<br>• Mine countermeasure forces<br>• 2 MEFs<br>• 2 MAWs<br>• 10 Air Force Fighter Wings<br>• 100 Air Force bombers<br>• 1 Army Air Assault Division<br>• 3 Army Heavy Divisions<br>• 1 Army Cavalry Division |

Table 8. MRC East Phase III Objectives, Concerns & Requirements

The scenario called for counter-offensive to be carried out in three sub-phases. Phase IIIA was focused along the Saudi Gulf coast and involved a simultaneous ground campaign and amphibious assault to encircle Iraqi forces. Phase IIIB continued the land campaign into Kuwait. The Marines re-embarked and conducted an amphibious assault in Kuwait. Phase IIIC secured all former Saudi and Kuwaiti political borders, established defensive positions along them, and pressed the conflict to conclusion.

Phase IV. As with the withdrawal and peace monitoring phase of the Korean crisis, identification of residual forces became an issue in the Gulf. This dilemma underscored the fact that peacetime requirements must be made part of the force structure size calculus. Because the issues raised in Phase IV of the Iraqi crisis mirrored those of the Korean crisis, little time was spent rediscussing them. Table 9 identifies the objectives, concerns and force requirements of this phase.

| | |
|---|---|
| **Objectives** | • Conduct peacekeeping operations<br>• Redeploy and reconstitute forces<br>• Ensure compliance with pro visions of war termination agreements |
| **Concerns** | • Protection of force withdrawal/redeployment<br>• Turnover to peacekeepers<br>• Residual force levels |
| **Minimum Requirements** | • Not determined |

Table 9. MRC East Phase IV Objectives, Concerns & Requirements

## Policy and Strategy Framework

At the conclusion of the first three days of deliberations, Higher Authority provided a summary of observations which set the policy and strategy framework for the three-star and Executive Sessions.

Higher Authority argued that in order to rationally choose a proper force structure strategy, national political aspirations and accompanying foreign policy objectives must be identified. The Clinton Administration has apparently determined that America's well-being depends on the existence of peaceful, stable change in the world. In order to ensure (or, at the very least,

to facilitate) that peaceful change, the Administration has determined that the U.S. must be a catalytic power and exert world leadership. The a priori assumption underlying that policy is that America cannot make a difference if it is not internationally engaged economically, politically, and militarily.

America's naval services are uniquely qualified to underwrite American foreign policy given they have sufficient force structure to maintain forward deployments.[4] The question currently facing the Department of the Navy is how can it best preserve its unique contribution under current fiscal constraints.

The force structure acquisition strategy which should be pursued by the Navy and Marine Corps must begin by recognizing what assumptions have been (or will be) accepted about the future security environment in which they must operate. Given that there is little likelihood of an emerging peer competitor over the next 20 years, there are two alternative security environment models from which to choose. The first model is one in which the world is relatively benign with respect to U.S. vital national interests. If this model is accepted, now is the time to divest old force structure so that the savings can be used to recapitalize. The assumption is that this is a unique window of opportunity which should be used to invest in new technology so that the Navy and Marine Corps can maintain a technological edge well into the future.

The second model posits a world in which a disintegrating security environment (or one which could disintegrate at any time) threatens to involve U.S. vital interests. If the second model is accepted as the foundation upon which force structure is built, then today's capabilities and force size should not be abandoned in favor of the promise of a better, more technologically advanced force tomorrow. A middle course, one which hedges against the possibility of disintegration in the near term, yet plots a steady recapitalization course for the long term, can also be selected.

There are risks in accepting the first model and its accompanying force structure strategy. The fact is that other governments are likely to join the U.S. in a coalition only if they feel they are safe in doing so (i.e., if the U.S. is capable of acting unilaterally, the attraction to join with the U.S. will be strong--if the U.S. must rely heavily on coalition assets to achieve desired ends, others will show much greater hesitancy

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[4] At the beginning of the game, N3/5 presented the Navy's latest briefing on the need and value of forward presence.

when asked to join forces). If today's capabilities are abandoned in order to release funds for recapitalization, the U.S. will not have sufficient forces to stay engaged in the world at the current level. Others will not see this change in U.S. forward presence as part of a force structure strategy but will see it as a U.S. withdrawal. Hence, their confidence in the U.S. will wane and our ability to attract coalition partners will be adversely affected. Domestically this strategy has other risks. If the naval services admit up front that the world is a relatively benign place, neither the Congress nor the taxpaying public is likely to support a recapitalization plan aimed at confronting an unknown future threat.

While that assessment may suggest that a modernization strategy, rather than a recapitalization strategy, is the best course to pursue, modernization runs it own risks. There are simply not enough dollars to both fully modernize and totally recapitalize. It is a zero sum game. Money used for modernization must be taken from recapitalization programs and vice versa. Thus, in the next 15-30 years, a modernization strategy would leave the naval services with block obsolescence of their forces and no affordable way to recapitalize.

The services are therefore left with the middle course, selective modernization and deliberate recapitalization. However, participants found that course to be more easily described than followed. Nevertheless, comparing the benefits of either modernization or recapitalization plans with the aims of national security policies will help ensure that the resultant decisions are defendable and understandable.

## III. ISSUE DEVELOPMENT

The remainder of this quicklook report provides a broad overview of the issues raised throughout the game. A brief conclusions section will follow the discussion of the issues. Being the fourth in this game series (and with the Department of the Navy's recapitalization plan well on its way), few issues not previously raised were debated. As the discussions concentrated more and more on the margins of the recapitalization plan, some topics which stirred heated debate in earlier games tended to sort themselves out (e.g, hosting a JFACC afloat). Other issues remained contentious (e.g., Naval Surface Fire Support). There were also issues raised in this game which some thought were previously resolved but which were reopened (e.g., weapons inventories).

Issues raised during the game were dealt with in working groups which corresponded to the four key operational capability areas identified in "... From the Sea," namely:

- Command, Control and Surveillance
- Battlespace Dominance
- Power Projection
- Force Sustainment

Preceding each phase, these working groups met in plenary sessions to receive situation updates and other guidance before deliberating separately. Following each phase, they reported their assessments in plenary session. Although asked to prioritize issues and programs, only the Power Projection Working Group regularly attempted to do so. As noted earlier, game sponsors provided game participants with a Summary of Top Issues (see Appendix A). Although these issues were all more or less discussed, not all of them were considered important enough for presentation to a panel of 3-star Navy and Marine Corps flag officers. This senior-level panel further refined the issues for presentation to an Executive Panel which included the Secretary of the Navy, the Chief of Naval Operations, and the Commandant of the Marine Corps. The final list of topics presented to the Executive Panel included:

- Preparation of the Battlespace
- Surveillance Challenges
- Dual Tasking of Units
- $C^4I$ Surveillance Plan & Architecture
- Tactical Ballistic Missile Defense
- Combat Identification
- Tactical Reconnaissance
- Command and Control Warfare
- Penetration of Enemy Defenses

- Force Closure
- Two MRC Force Levels
- Reserve Utilization
- Strike Weapons Balance
- Combat Logistics
- Naval Surface Fire Support
- Combat Sustainability

Since most of the issues briefed under each of these topics were contained in the fuller discussions of the issues which participants were asked to consider, the list of issues from Appendix A will be used in the following sections. Additions will be discussed at the beginning of each section.

### IIIa. Command, Control and Surveillance

The Command, Control and Surveillance $C^2S$ Working Group, like all other working groups, was provided a dozen topics to assess and instructed that it could also raise any new issues which emerged during the game. These ranged from surveillance issues and communications concerns, to indications and warning programs. Several of the provided topics were compressed into a single discussion area for presentation to the Executive Panel. This single topic, entitled Surveillance Challenges, included detection of TBMs, coastal cruise missiles (CCM), mines and minefields. $C^2S$ was often referred to as "the glue that holds other warfighting capabilities together." Also recognized was the fact that a concerted Joint and national effort was required to meet surveillance challenges. The keys to this combined effort were identified as connectivity and interoperability. Successful interoperability will in large measure rest with the acceptance of common standards for use in new systems.

Interoperability presents other challenges beyond surveillance challenges. For example, allies often express the fear that U.S. communications capabilities will outstrip their ability to keep up. Past U.S. policy has been to maintain connectivity between older and newer communications systems. This policy drives up the cost of newer systems and requires fleet and force personnel to maintain both old and new systems. If communications systems could be built to common standards, it would not only enhance joint interoperability but, if these standards are accepted internationally, would advance coalition interoperability as well.[5]

On the whole, game participants believed the Department of the Navy continues to pursue a responsible investment plan for communication and surveillance architecture. They also believed that no major technical hurdles lie in the path of full interoperability. Nevertheless, participants believed the Services remain a long way from having full interoperability.

As noted earlier, not all issues listed Appendix A were

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[5] There was one political ramification of building to common standards which was not discussed; the problem of sharing standards with states on the periphery of the West (e.g., Russia and China). If these nations do not build to the same standards as other potential coalition partners, integrating them into a combined force will be much more difficult. On the other hand, until their internal challenges are overcome and they are welcomed into the club of pluralistic democratic nations, their will be justified reluctance to share technology with them.

briefed to the Executive Panel. However, the following paragraphs provide a brief overview of the game discussion in each identified issue area.

Generic Airborne Sensor Package Requirements. The Naval Service requires sensor packages, such as the Tactical Air Reconnaissance Pod System (TARPS), the Advanced Tactical Air Reconnaissance System (ATARS), and the Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES) on manned aircraft, and a variety of reconnaissance packages, such as the Electro-optical, Long-Range Oblique Photography System (EO/LOROPS), on unmanned aerial vehicles (UAV). Other organic systems which provide electronic and signals intelligence, radar imaging or combat direction finding also help complete the surveillance mosaic. The Navy and Marine Corps also need to ensure they have connectivity with theater and national sensors such as AWACS and JSTARS.

TBM/CCM Detection. The systems mentioned above are essential to the successful detection of mobile systems. Continuing to work toward obtaining a cooperative engagement capability (CEC) is also integral to successfully countering the missile threat. Most participants believed that these systems were best detected and localized by theater rather than national assets.

Layered Intelligence and Communications Architecture. The ultimate goal of the intelligence and communication architecture master plan is to provide commanders with a common tactical picture. This requires seamless connectivity, fused intelligence products, and near real time distribution of information. High capacity communication paths which meet fleet needs into the next century are currently funded and on track.

Mine Detection. The $C^2S$ Working Group noted that countering the mine problem will require a strategy which combines policy (i.e., ROE), intelligence (i.e., data bases), early covert surveillance (from unmanned undersea vehicles (UUV), special operations forces (SOF), and submarines), in-stride search/sweep capabilities (e.g., UUV, Laser Image Detection and Ranging (LIDAR), Thunder Road) and CJTF fusion of this information.

Broad Area Search. There was some concern expressed that defense policy seems to be shifting to a greater reliance on national systems for broad area search. For the CJTF, there are definite limitations on the utility of national systems (including their predictability, periodic coverage, and availability). A number of complementary systems were identified as necessary to provide adequate broad area search. In addition to national sensors, these included, inter alia: UAVs, JSTARS, Aerostat, EP-3s, ES-3s, SSNs, surface platforms, manned aircraft, and Imaging

Synthetic Aperture Radar (ISAR) aircraft. Ensuring connectivity between these systems, especially for Marines ashore, was the greatest concern expressed.

National Asset Availability for Two MRCs. By the turn of the century there will be a diminishing number of overhead assets from which to draw support. Even though the new systems will be more capable than current assets, coverage and revisit times may suffer. Connectivity to national systems also remains an issue which much be addressed. This is true for one MRC and is exacerbated when support is required for a second MRC. The $C^2S$ Working Group concluded that there will not be enough assets to support two nearly simultaneous MRCs.

Combat Identification. The Services have had procedures in place for some time to deal with the problem of combat identification. Desert Storm, however, proved that in today's era of televised conflict, procedures simply are not good enough. The area which seemed to run the greatest risk of amicide (i.e., the inadvertent killing of friends) is in the air-to-ground arena.[6] The Army has the lead on developing systems in both the air-to-ground and ground-to-ground areas. The Army and the Marine Corps will shortly sign a memorandum of agreement to work together on the Battlefield Combat Identification System (BCIS). The Navy has the lead in the air-to-air arena. Although not specifically a combat identification problem, systems which provide improved situational awareness for commanders, pilots, etc., should have the added benefit of reducing amicide, including the Automatic Target Handoff System (ATHS).

CJTF/JFACC Afloat and Transition Ashore. Compared with previous games where this topic generated as much heat as light, relatively little was discussed during **SECNAV Wargame 94**. Past discussions have centered around the necessity/advisability of building a new command ship specifically to satisfy the requirements of hosting CJTF and JFACC staffs. The general belief is that the Navy has programmed sufficient communications assets to meet these requirements. The issue of real estate (that is, whether sufficient berthing and office space exists on current ships to host the staffs) can only be resolved if the CJTF and JFACC move aboard with skeletal staffs. This concept will be tested during the upcoming exercise Tandem Thrust.

$C^4I$ Logistics Interoperability. Logistics interoperability will require the introduction of common systems--a task more easily recommended than achievable. A system like the Joint

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[6] The term often used is fratricide rather than amicide, which actually refers to the killing of brothers.

Maritime Command Information System (JMCIS) was recommended. The desired capability is to provide materiel tracking from factory to foxhole.

Peacetime Intelligence Data Bases. The development of peacetime data bases will become increasingly important as U.S. forces decrease and high technology weapon systems proliferate. Peacetime identification of possible target sets (both hard and soft kill targets) will greatly enhance both information warfare and power projection effectiveness. Once again, the more commonality which can be achieved the greater the interoperability between Services. Currently, for example, Navy and Air Force targeteers use entirely different data bases and planning systems. The working group pointed out that the Reserves could play a significant role in this area through the development and maintenance of the data base.

Command and Control Warfare ($C^2W$). Command and Control Warfare was an area not discussed at past games where Electronic Warfare (EW) was the buzzword. $C^2W$ expands on EW. Although one participant objected to the growing tendency to make everything a specialized warfare area, hinting that laundry warfare was not far down the road, the $C^2S$ Working Group felt that this was an area which could provide high payoffs for minimal costs. By identifying hard kill shortfalls and ways to leverage soft kill strategies, $C^2W$ can significantly improve the effectiveness of other warfare areas.

Common Data Architecture USN/USMC and Joint. The Navy and Marine Corps are working on a Joint Maritime Command Information System (JMCIS) which help them share data. Identifying a truly Joint common data architecture has not progressed as far.

## IIIb. Battlespace Dominance

Battlespace Dominance issues, like those just discussed in $C^2S$, tend to affect all other warfare areas. Hence, a significant overlap of issues was the result (e.g., in areas such MCM, TBMs, tactical reconnaissance, WMD, and common mission planning). Of the dozen issues provided for discussion in this area, only Force Structure & Employment, Tactical Reconnaissance & UAVs, Mine Countermeasures, and Joint Theater Ballistic Missile Defense, were briefed to the Executive Panel.

One of the first issues raised by the Battlespace Dominance Working Group was the requirement to protect sealift. The reduced force structure of the Navy and Marine Corps means that there will be few redundancies among the equipment moving into the theater. Therefore, the loss of shipping containing any unique capabilities will have a significant affect on crisis prosecution. In addition, many of the ships carrying crisis supplies are very large. Loss of a single ship can have a major impact. The group asserted that the "safe and timely" arrival of sealift assets was of prime importance. The impact of this strategy could be a delay in the arrival of supplies with a concomitant affect on any operational plans (OPLANs) dependent upon early arrival of affected materiel. The working group's philosophy was "better late and safe than early and destroyed." The availability and condition of sea ports of debarkation (SPODs) was also a concern.

The following paragraphs reflect discussions held in each of the issues provided at game start.

Mine Countermeasures. MCM is a critical enabling function. As noted in the $C^2S$ section, surveillance is critical to this effort as is a broad-based strategy to counter the threat. The working group's first concern was the lack of forward deployed MCM assets. Since MCM is a critical enabling function, delays in arrival of MCM assets can back up other crisis response time lines. Establishment of organic MCM capabilities for carrier battle (CVBGs) and amphibious ready groups (ARGs) was one recommended solution to the problem. The most promising programs for deployment include Air MCM assets and MCM variants of the air-cushioned Multi-mission Craft (MCAC). The working group also recommended that an "in-stride," shallow water MCM clearance and breaching capability be developed (including the ability to detect buried mines). They fully supported the development of clandestine mine reconnaissance and destruction capabilities discussed by the $C^2S$ Working Group. The adequacy of U.S. forces for two MRCs was seriously questioned which led to the recommendation to pursue allied support.

Coordinated Joint Theater Ballistic Missile Defense. The working group pointed out that protection of troops and reinforcement activities (as well as the maintenance of political cohesion) may depend upon having a credible TBMD capability in theater early. Land-based TBMD requires airlift and/or sealift and there was some doubt about the status of ports and airfields which were needed to receive the equipment. Sea-based TBMD may therefore be critical. A credible TBMD capability, however, requires complementary land-based and sea-based systems with effective connectivity. The sea-based capability must be put on enough platforms to ensure it can be reliably available.

Initial Presence/Deterrence. The question of whether forward deployed forces really deter is likely to remain controversial since there is no way to quantify events that don't happen. A seminar such as **SECNAV Wargame 94** could offer little help since the purpose of the game was to test programmed forces during combat which meant, by definition, deterrence had to fail. Thus in this scenario, no combination of forward deployed forces could deter the aggressors. Participants did agree, however, that the investment in a force structure capable of maintaining a robust forward deployed profile would be, in the long run, the least costly course for America to pursue. The impact of downsizing was believed to subtly affect numerous areas. For example, with fewer aircraft per carrier deck and fewer pilots per aircraft, future airwings will not be capable of generating the same number of sorties as they have been able to in the past. The ability to rapidly build combat power will be limited as will be the capability to sow offensive mines. The working group recommended that the Department of the Navy maintain a robust forward deployed exercise program since it best demonstrates U.S. commitment and presence.

Missile Defense (CCM & WMD). Air superiority is a precondition of Battlespace Dominance. Coastal cruise and theater ballistic missiles, especially TBM carrying nuclear, chemical or biological warheads, present unique and difficult challenges to the CJTF. The early establishment of an air space command is essential as is pursuing the capability to provide integrated theater connectivity. Even with full integration, cooperative engagement, and improved sea- and land-based missile defenses, countering the missile threat may require more weapons than are currently planned. Since the footprint which can be covered by a single platform is dramatically improved by a exo-atmospheric (or upper tier) capability, the working group recommended its continued development.

Tactical Reconnaissance. Of all the issues, this one most heavily overlaps the discussions of the $C^2S$ Working Group. The

Battlespace Dominance Working Group noted that the goal for tactical reconnaissance is to provide real time, 24-hour coverage, with rapid dissemination of reconnaissance products to commanders in the field. Good situational awareness provides such a tremendous combat advantage that pursuing systems which help achieve it becomes critical. The most important challenges for these systems are the detection and localization of mobile targets, key command and control nodes, mine fields (both land and sea) and other assault obstacles. The assets available, programmed, or in development which assist in this area are many of the same ones noted in the previous section; namely, Special Operations Forces (including the Advanced Seal Delivery System (ASDS)), manned aircraft systems (ATARS, TARPS, JSTARS), UAVs (Hunter/Tier II), surface combatants and submarines. Even with that variety of platforms, the working group believed that there will be insufficient tactical reconnaissance assets available to support two MRCs.

Shallow Water Antisubmarine Warfare. The working group noted that a submarine threat could be a show stopper even when going against older diesel submarines. Emphasis was placed on the verb "could" since the general feeling was that sufficient ASW assets could be brought into theater to handle the problem and that, overall, ASW programs should have a relatively low priority. Nevertheless, several programs were highlighted as critical for maintaining the Navy's ability to deal with the diesel submarine threat. The highest priority was given to the P-3 aircraft improvement program. Other current programs which the working group recommended be continued included the modified advanced capability (ADCAP) MK-46, the MK-50, and hybrid torpedo programs; shallow water sensor improvement programs, and Surface Ship Torpedo Defense (SSTD) development.

Common Mission Planning. Currently when Air Force mission planners work with Navy mission planners (or vice versa), they must rely solely on professional judgment because Air Force and Navy mission planning systems are completely different and incompatible. A common mission planning system is required in order to run models and simulations and provide planners the tools necessary to consider "what if" scenarios. In order to improve effectiveness, new systems should be developed to common standards, and have an integrated architecture.

Small Boat Threat. The consensus of the working group was that the small boat threat could be countered using existing or programmed systems. Surveillance cuing is especially useful in increasing fleet effectiveness against small boats. Even more effective are preemptive strikes by special operations forces. If preemption is not politically feasible, integration of coalition armed helicopters and patrol craft will provide more

efficient and effective use of limited assets.

Post-MRC 1 Presence/Deterrence Forces. Although there was a need for a post-conflict deterrence posture, not all forces needed to be U.S. The working group recommended a vigorous political campaign to encourage regional participation. The residual force needed to be of sufficient strength to support forcible entry operations. Residual forces were also needed to clear Korean harbors (both North and South), establish a maritime surveillance program, and support elimination of WMD production capability. Depending on the situation, residual TBM defenses were also considered as candidates to remain in South Korea. To help prevent future adventurism, the group recommended that an information warfare program be supported in the DPRK.

Surface Force Combatant Numbers. The working group determined that projected force levels will be nominally sufficient for two MRCs. The controlling factors were weapon load points, weapons inventory in each theater, and the number of forward deployed assets in theater at the beginning of the crisis. Because of the unique capabilities surface combatants could bring to bear (particularly TLAM and TBMD) and their greater availability than the carriers, the working group proposed deploying surface combatants ahead of the carriers. To ensure that sufficient numbers of capable ships are available to respond, support was urged for current guided missile destroyer (DDG-51) procurement and Baseline 3 guided missile cruiser (CG) upgrade profiles. They also supported funding Baseline 2 upgrades for older CGs. Development of ordnance logistics nodes for reloading vertically-launched weapons was also recommended.

WMD Decontamination and Environmental Clean-up. Use of persistent chemical agents was possible by the DPRK and probable by Iraq. Because current U.S. decontamination capabilities were found wanting, use of chemical agents had the potential of dramatically slowing reinforcement time lines. Acquiring a naval decontamination capability was a persistent theme of the Force Sustainment Working Group. The Force Sustainment group also raised the environmental clean-up issue. Although some participants tried to wish the problem away (or as an alternative admit up front that war is a dirty business and tell the countries involved to clean up the mess themselves), others believed this was a bill which the military would have to pay. The Force Sustainment group recommended the establishment of environmental crisis action teams which could be used to spearhead clean-up efforts. Whether these teams should created and, if they are, whether they should consist of active duty or reserve personnel was left unresolved.

Post-MRC 2 Presence/Deterrence Forces. As in the Korean

scenario, the conditions attached to war termination are extremely important when determining residual force levels. Particularly, the group believed that inspection protocols must be adequate to ensure compliance. The working group tried to avoid duplicating issues already covered in post-MRC 1 discussions and concentrated on the readiness of forces to resume peacetime operations. The viability of current cyclic readiness work-ups was the first concept questioned. Post-Desert Storm operations taught that reestablishing acceptable turn-around ratios can take over two years since forward presence requirements do not end with the conflict. New turn-around ratios could be established (i.e., longer deployments and shorter turn-arounds) but the long-term costs in material condition of forces and morale of personnel are probably too high to pay. There was also a question about when the operations and personnel tempo (OPTEMPO/PERSTEMPO) clock starts. Some suggested that it start fresh following the conclusion of the crisis. The result of that policy would be that some units would remain deployed upwards of 10 months. The most important conclusion reached by the group was that readiness dollars must be maintained.

## IIIc. Power Projection

The Power Projection Working Group were quick to note that power projection includes all types of combat power from missiles to bayonets. Therefore, a great deal of time was spent discussing ground mobility requirements for the Marines as well as air requirements for both the Marine Corps and the Navy. Although the Marines clearly favor procurement of the V-22 Osprey as the replacement aircraft for their aging H-46 fleet, its cost has forced them to consider other medium lift alternatives (MLA) as well. They also strongly favor procurement of the Advanced Amphibious Assault Vehicle (AAAV) which can self-deploy from the sea and keep pace with their main battle tanks once ashore. The AAAV leaves Marine air-cushioned landing craft (LCAC) free to transport artillery and other equipment so that the build up of combat power ashore can be completed as rapidly as possible. Mobility rests at the very heart of operational maneuver from the sea (OMFTS). When discussing naval aircraft procurement, the working group noted that there exists a fine balance between modernizing the current fleet and procuring new aircraft.

In prioritizing their requirements, the group's highest priorities were to ensure that power projection platforms (i.e., CV(N)/LX/LHD) remain on track, and that new projectors (i.e., MLA, FA-18E/F, AAAV) be procured. Waiting for a stealthier follow-on aircraft was not considered an alternative since the Joint Air Strike Technology (JAST) aircraft is currently part of a process not a program. Following are brief discussions on other issues the group was asked to consider.

Combat Identification. The Power Projection Working Group pointed out the clear differences between combat identification and stand-off targeting requirements and how one impacts the other. Lack of effective combat identification restricts combat capability (that is, missiles remain on the rails when they could (or should) have been launched). The only current alternative is risking amicide. They agreed with the $C^2S$ group that the Automatic Target Handoff System would help alleviate this problem.

Precision Strike Requirements. Affordability was identified as the biggest issue in this area. The more stealth and precision that are built into either aircraft or weapons systems the higher their cost. The group discussed the need for balance in these in the following areas: stealth vs. standoff; accuracy vs. precision; and the dumb vs. smart weapons inventory (i.e., make smart decisions about dumb weapons). They noted that although there has been a determined effort to neck-down the number of different weapons programs under development, there is still room for reductions. In deciding which weapons to keep or pursue, the requirements of the ground commander must be considered (for

example, some weapons must be all weather capable and provide adequate ground cover). An over reliance on very expensive, precision-guided weapons will ultimately reduce inventory numbers and adversely effect training and readiness (since weapons will be too expensive to train with).

Dual Tasked Units. The Power Projection Working Group noted that CINCs have traditionally been skeptical of swing strategies. Few commanders willingly release forces under their command for use elsewhere while fighting continues in their area of operations. The likely solution to this dilemma will be an NCA political decision about which forces go where and when. Even considering NCA intervention, the group believed that scenario time lines were overly optimistic (an assessment shared by the Force Sustainment Working Group). The group openly questioned what affect the late arrival of U.S. forces would have on both the political will of coalition partners and the overall crisis response strategy in the second MRC. Another issue, and by no means a trivial one depending the time of the year the MRCs occur, is the issue of acclimatization of personnel and the availability of proper clothing. Attrition also plays a large part in either the success or failure of any swing strategy. The Air Force representative was much more optimistic than the other Services about the ability to swing forces rapidly from one MRC to the next.

Close Air Support vs. Attrition Strikes. Two different aspects of this issue were discussed, the need for the right support weapons and the balance between missions. The weapons issue will be discussed below. It should be noted here, however, that close air support (CAS) requires some all-weather weapons since it currently represents the primary fire support option for the Marines. The second issue, the focus of carrier-based naval air missions, continues to elicit debate since Navy training, particularly in the close air support mission, has not advanced as far as the rhetoric. Even though consensus has been reached that "... From the Sea" commits the Navy to supporting forces ashore, a procedure for balancing CAS and attrition strike missions has not been identified. Because of this uncertainty, the Marines strongly support the establishment of Expeditionary Air Fields in direct support of their ground forces.

Aircraft Sensors to Support Standoff Weapons. The goal in this area is to select the aircraft/weapons combination which permits standoff, all-weather targeting and attack. Affordability once again became an issue. Effectiveness could be greatly improved by developing sensor to shooter data links and by perfecting target coordinate bombing. These capabilities will prove particularly helpful in countering the relocatable target problem.

Penetration of Enemy Defenses. The working group pointed out that this is not just an air issue but also has repercussions on land and sea. In the air, penetration of enemy integrated air defense systems (IADS) remains a challenge. Issues raised during this discussion dealt with survivability and affordability. During the debate, players argued the cost versus survivability benefits of reusable systems (manned aircraft) versus non-reusable systems (TLAM/TSSAM). Survivability issues also touched on the trade-offs between platform and weapon stealth and between self-protection and supporting jammers . The group prioritized a modified (more affordable) EA-6B program higher than either the advanced self-protection jammer (ASPJ) or the integrated defensive electronic countermeasures (IDECM) program. The cost of standoff and stealthy weapons makes near real time Bomb Damage Assessment (BDA) absolutely essential so that expensive weapons are not wasted on unnecessary reattacks. Enemy sea defenses which must be penetrated include mines, submarines, coastal cruise missiles and obstacles to amphibious assaults. The group agreed in principle with the recommendations of the Battlespace Dominance group for countering these threats. The most challenging land defenses are extensive minefields but strategies for countering this threat was not discussed in any plenum.

Naval Surface Fire Support Mix of Systems. As noted earlier, the current primary fire support available to Marines fighting on the ground is naval air. They are insistent, however, that air, missile and naval surface fire support (NSFS) are all required to adequately meet ground force requirements. This will become increasingly true as air and missile support become more expensive. Although a shipboard firing of the Army Tactical Missile System (ATACMS) has been directed, the cost of the system will probably make it an unaffordable option. Therefore, the Marines strongly support the development of improved naval guns. The recommended near-term solution is the retrofit of 12 ships with 5-inch/70 guns. Two long-term solutions are placing a 155mm/60 gun on new construction ships (which should be available in about five years) and pursuing electro-thermal-chemical technology.

Level of Effort (LOE) Weapons in Close Air Support. The Marines expressed concern that level of effort weapons (primarily MK-80 series bombs) inventories could suffer as enthusiasm grows for precision-guided munitions (PGMs). They pointed out that PGMs are dropped individually whereas their requirements often call for clustered weapon drops to provide maximum ground coverage. Recommendations included keeping the MK-80 bomb line open and negotiating with the Air Force to procure excess MK-80 series bombs from their inventory.

Establishment of Expeditionary Air Fields. The working

group felt this capability was particularly important in the Korean scenario where many of the airbases were overrun by DPRK forces. Even with Japanese bases available, EAFs were required. Strikes flown from Japan had to traverse significant distances which increased tanker requirements and decreased sortie generation rates. The increase in tanker requirements meant that proportionally more ramp space was required for those tankers which decreased the ramp space available for strike aircraft. The challenge in establishing an EAF is getting the steel matting into the theater. The preferred Marine Corps solution is to increase each MPF set by one ship which would provide enough space to carry the matting as well as more armor and sustainment. This not an inexpensive alternative, however, and no decision was made whether or not to support it.

Carriers vs Large-deck Amphibious Ships for Providing Post-War Presence. The working group insisted that the wrong question was being asked. Post-war circumstances will dictate which platform should remain. If air options are required, then the carrier is the best answer. If, however, maintaining air superiority is not a problem and ground forces may be required, the amphibious option is the best solution. Events elsewhere in the world and the availability of decks and aircraft must also be taken into account. Game participants raised the caveat that programmed forces provide reduced options for dealing with post-conflict presence and that they could not be stretched very far.

Post-War Aviation Support. This topic generated little discussion--primarily because the military can neither dictate the requirements nor determine whether they can best be met by sea- or land-based aircraft. Participants believed U.S. aircraft would be required to remain in both theaters following the end of the conflict. Korean requirements could probably be met by land-based air since South Korea is used to a large land-based U.S. presence. This is not true for the Persian Gulf since regional states in the Gulf prefer not to have a large foreign presence on their soil.

Post-War Monitoring. The limited availability of surveillance and reconnaissance systems, especially in a two MRC scenario, has been mentioned several times. This means that assets available for post-war monitoring will also be extremely limited since there will be competition for these resources. In both scenarios, war termination agreements will determine, to some extent, how much and what types of monitoring will be required. The goal should be to return to pre-war levels. The Department of Defense needs to articulate its requirements for using national systems so that defendable arguments can be made about the requirements for tactical systems.

## IIId. Force Sustainment

The Force Sustainment Working Group was able to draw from lessons learned at a logistics wargame played at the Naval War College in Newport, RI, shortly before **SECNAV Wargame 94.** All recent wargames, including this one, have pointed out the necessity of making a reserve call-up at the start of a major crisis. Presidential call-up of selected Reserves in **SECNAV Wargame 94** was not made until day 9 and this had a dramatic impact the establishment of the logistics train bringing supplies into theater. The Force Sustainment Working Group supported legislation which should be reintroduced in Congress this year granting the Secretary of Defense limited call-up authority.

The working group also underscored the importance of having access to commercial ports in both theaters of operation since commercial sealift will be required in both scenarios to meet sustainment needs. Specific issues which the group was asked to consider are listed below. Although a dozen issues were provided for the working group to consider, two of them (Preferred Weapon Inventory Availability and Strategic Airlift and Sealift Availability) were duplicated in various phases. For this quicklook, they are grouped together.

Preferred Weapon Inventory Availability. In **SECNAV Wargame 93,** the preceding game in this series, the Force Sustainment Working Group determined that programmed inventories of standoff and PGM weapons were insufficient. In this game, PGM inventories were once again depleted rapidly. This issue was revisited during this wargame and generated the weapons discussions noted above in the Power Projection section concerning maintaining a proper balance between PGM and LOE weapons. The group noted that the Navy planned negotiating with the Air Force to procure some of their excess level of effort ordnance.

Protection of Sealift Assets. The Force Sustainment Working Group agreed with the Battlespace Dominance group that the late arrival of sealift assets was preferable to bringing them into theater prematurely and losing them to enemy mines, missiles or torpedoes. Once in theater, air- and seaports of debarkation are highly vulnerable to TBM attack and sustainment flow could be dramatically decreased should persistent chemicals be used. The group therefore recommended the Navy obtain a decontamination capability. The only alternative is to rely on Army assets which are extremely limited and may not be available.

Strategic Airlift and Sealift Availability. Closely tied to the protection of lift assets is lift availability. One of the ironies of force reduction is that lift requirements actually increase as more and more assets must be drawn from CONUS. The

build up of combat power is essential to reduce the risks to defending forces. Lift shortfalls may also extend the duration of the campaign. The working group recommended expanding the prepositioning program, augmenting MPF sets, basing Ready Reserve Force (RRF) ships overseas, and assessing the viability of establishing a civil reserve sealift fleet. One of the reasons that defense planning guidance calls for "nearly simultaneous" MRCs is so that two complete sets of sea- and airlift are not required. Requiring forces to swing, however, severely limits response time to the second MRC. In the Korean scenario, limited availability of ports highlighted the need to procure elevated causeways (ELCAS) to support logistics over the shore (LOTS) operations. On the airlift side, U.S. capability will decrease approximately 23% because of accelerated C-141 retirements and delayed C-17 acquisition. The Civil Reserve Air Fleet (CRAF) was deemed inadequate to fill the shortfall.

In-theater Repair. Although the working group believed there were sufficient tenders available to support in-theater repair, the effort will require numerous fly-away teams.[7] In order to support the second MRC, the group recommended the procurement of a third T-AVB ship to support Marine aviation maintenance.

Medium Lift Capability. As noted in the Power Projection section, three systems form the foundation of operational maneuver from the sea for the Marine Corps, a replacement for their amphibious assault vehicle, LCACs, and a medium lift replacement aircraft. The preferred MLA, the V-22, provides significant improvements in over the shore lift capabilities. The V-22, however, will not satisfy the Combat Logistics Force H-46 shortfall because of its size. A replacement aircraft for the CLF will eventually have to be identified (with the preferred option having either twin-rotors or counter-rotating blades so that it is not dependent on wind direction).

Sea-based Logistics Capability. Program Review (PR) 95 only funds two Military Sealift Command combat stores ships (T-AFS) leaving a turn of the century shortfall of five ships. There will also be an eleven helicopter shortfall in H-46s to meet the combined requirements for Combat Logistics Force (CLF) vertical replenishment (VERTREP) and amphibious task force search and rescue (SAR) missions. The group recommended funding a T-AFS mid-life upgrade and operations, accelerated construction of a

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[7] There was some discussion about maintaining enough tenders in reduced operating status (ROS) to provide an optimum of three tenders per contingency. No consensus was reached concerning this proposal.

new class of dry cargo ship ADC (X), and a roles and mission study on the H-46.

Amphibious Assault Follow-on Echelon (AFOE). The Power Projection Working Group noted that one MRC requires the entire amphibious lift force which means the entire force must also swing to the second MRC. The attrition level of amphibious lift during the first MRC can severely impacts the ability to respond to the second. In this game, two amphibious ships were lost. Current amphibious lift building programs secure only enough vehicle square footage to transport 2.17 MEB equivalents (goal is 2.5). The same swing strategy will also have to be used for lift supporting the AFOE. The Mobility Requirements Study did not consider the criteria for a second MRC and the group recommended that it be updated to reflect these additional needs.

MPS Regeneration. Each scenario in this game required two MPF sets; however, minimum regeneration time for a swing MPF set does not support the anticipated second MRC time lines as provided in the game scenario. The group anticipated that regeneration and redeployment would take between two and three months. Even transporting prepositioned war reserve material via other means and bringing additional armor from CONUS does not meet the proposed time lines. The impact on the second MRC is that there will be minimum combat capability available and even it will have marginal sustainability. Although the acquisition of an additional ship per MPF set provides more sustainability, serious delays in campaign time lines can be expected.

Regeneration of Weapons Inventory. Because of the intensity of the two MRC scenarios considered in this game, most, if not all, of the precision-guided, standoff, and missile defense weapons were expended--many in the first few days or weeks of fighting. It was also determined that the Marines had selective ground ordnance shortfalls in 40mm, mortar rounds, shoulder-launched multipurpose assault weapon (SMAW) ammunition, and line charges. This meant that weapons apportionment was critical for meeting the requirements of the second MRC. Regeneration of expended munitions bins will be costly and lengthy, probably in excess of two years.

War Reserve Regeneration. As noted above, regeneration of weapons and other materiel will be neither quick nor cheap. The estimates of the working group was that the industrial base will be insufficient to repair and replace equipment and ordnance within two years. As with other regeneration issues discussed, the group recommended maintaining a warm industrial base to support rearmament.

## IV. CONCLUSIONS

When the 3-Star Panel was briefed, game participants provided what they saw as the major game themes, which were:

- Role of Department of Navy forward presence forces
- Readiness of naval forces
- Ability to influence action
- First in -- last out
- Unique competencies of naval forces
- Joint interoperability

One major theme permeating the game which was not briefed separately but which was woven throughout the briefing was the difficulty in providing sufficient forces for two nearly simultaneous MRCs. The issue was not whether a second MRC could be fought and won but how "nearly simultaneous" the MRCs could be. Consensus seemed to build throughout the game that the DPG scenario time lines presented were too optimistic. The Bottom-Up Review provides no clear definition of what "nearly simultaneous" means and game participants recommended that further assessment be made to help more precisely determine time lines which can be met realistically.

As part of the assessment process, it was also recommended that these scenarios be fully gamed at the Naval War College to better determine how enemy strategies, attrition rates, joint/coalition participation, and U.S. policy objectives impact programmed systems. This game, although providing for Joint and coalition play, emphasized the contributions naval forces in a two MRC scenario.

Role of Department of Navy forward presence forces. The Bottom-Up Review notes that "U.S. forces deployed abroad protect and advance our interests and perform a wide range of functions that contribute to our security." It also notes that the requirement for forward presence forces must be used to help "size general purpose forces." Although impossible to prove that forward presence forces have deterred aggression (we only know when it fails), Higher Authority noted that one way to ensure U.S. forces will be engaged in future combat is to withdraw them from areas in which the nation has interests. The cost of conflict is always much greater than the cost of maintaining peacetime presence forces. Participants briefed the Secretary that timely response is the trademark of naval forces; maintaining sovereign

and mobile bases forward deployed is their forte; and that promoting stability and collective security is their legacy and future. Even small reductions in the programmed force structure significantly affects the Navy's and Marine Corps' ability to respond quickly to crises.

Readiness of naval forces. Readiness was a concern of participants throughout the game and it revealed itself in two different areas: first, readiness of personnel; and, second, material readiness. If naval forces are to learn to fight smarter, the quality of personnel attracted into the maritime services must be maintained. Once recruited, personnel must be provided a rigorous training schedule. Although an increased amount of training may be completed with the help of simulators, participants recommended maintaining current levels of at-sea days and flight hours. They also recommended exploring alternatives to current cyclic readiness profiles used to prepare forces for deployment. Force structure readiness cannot be separated from personnel readiness. Players noted that if forces are reduced to the point that their operational tempo does not permit adequate overhaul periods, then their material condition will inevitably suffer. High operational tempo will also have an adverse impact on personnel tempo which will result in decreased morale and retention.

Ability to influence action. The ability to influence action includes pre- and post-conflict actions as well as those made during a contingency response. The preferred result of forward deployed forces is deterrence of adventurism by rogue states. Past nefarious behavior of these states, however, indicates that deterrence is not always possible since it relies on rational responses. The ability to influence also includes influencing friends as well as enemies. As a recent Department of the Navy update noted, "Peacetime exercises and operations enhance U.S. political legitimacy, force credibility, operational effectiveness, and access." Higher Authority reiterated that the U.S. ability to influence friends rests in large measure on its capability to act unilaterally. Simply put, winners attract friends. The only forces which will not influence actions (friend or foe) are those that are not present.

First in -- last out. As one participant commented, "Forward presence doesn't end." Contingencies come and go but the requirement for U.S. forces to remain engaged does not change. The fact that naval forces are likely to be on routine patrol prior to conflict, remain on station during the fighting, then assume peace monitoring responsibilities following a crisis, means that naval force structure cannot be sized solely based on contingency requirements. The fact is, a larger peacetime force structure base must be in place to support contingency response

forces. Today's rules for allocating forces for presence operations are easy to understand; days that assets are available are compared to days that assets are desired then they are apportioned in line with national objectives. Gaps exist and will continue to exist. When a force is on a "tether" outside a region, that force does not provide presence it provides response time. Therefore, if peace monitoring requires a continuous presence of naval forces, significant gaps can be expected in other areas of interest to the United States.

Unique competencies of naval forces. As America's armed forces are reduced, stressing each Service's unique and complementary competencies becomes more important. The naval services can deploy relatively easily to areas where crises are anticipated or feared; they can conduct traditional at-sea missions (e.g., keeping sea lanes open) and also significant air and ground operations; they can readily provide high or low profile presence; they have a legal right to transit the seas and to hover off a nation's territorial sea; they have great capability to sustain themselves; they can rely extensively on afloat basing free from foreign political control; and they are making substantial strides to insure ease of interoperability with other Services. The two unique capabilities most often stressed during the game were the Navy's promising Theater Ballistic Missile Defense program and the Marine's Expeditionary Air Field capability. In both instances, getting those capabilities into the theater early became an important factor in the success of the campaign.

Joint interoperability. Currently, full interoperability is more of a goal than a reality. New systems must be built to common standards if full interoperability is to be achieved. The desired objectives, however, are clear. Participants said the first goal is to provide commanders with a common tactical picture. They also discussed the requirement for common mission planning systems and data bases. Once the fighting began, participants wanted sensor to shooter handoffs, cooperative engagement capability, interoperative weapons, and real time bomb damage assessment. Players noted some improvements have been made. The Navy is now capable of hosting a Joint Force Air Component Commander afloat; there has been a significant increase in the number of joint weapons development programs; and the Services are working together in most other areas to improve interoperability. Joint interoperability was not the only challenge identified. Participants noted that allies and potential coalition partners fear that America will improve their capabilities to the point that they won't be able to keep pace. Such a development would decrease rather than increase interoperability.

As stated at the outset, **SECNAV Wargame 94** used warfighting concepts of "... From the Sea" to frame discussion of critical

POM 96 issues in a seminar format. Other future interactive operational level games specifically designed to test doctrine could examine and further define concepts such as operational maneuver from the sea, battlespace dominance, naval expeditionary forces, and command and control relationships. Lessons from this type of game serve to complement any subsequent POM-level seminar. Such an evolutionary process could very well change traditional warfare structures of the CVBG and ARG.

# APPENDIX A

## TOP ISSUES SUMMARY

# SECNAV GAME '94 TOP ISSUES SUMMARY

| SESSION | C2 SURVEILLANCE | POWER PROJECTION | BATTLESPACE DOMINANCE | SUSTAINMENT |
|---|---|---|---|---|
| 1 MON PM | • GENERIC AIRBORNE SENSOR PACKAGE REQUIREMENTS<br>• TBM/CCM DETECTION<br>• LAYERED INTELL/COMMS ARCHITECTURE | • COMBAT ID<br>• PRECISION STRIKE REQUIREMENTS (ALSO HALTING ARMOR)<br>• DUAL TASKED UNITS | • MCM/MINE COUNTERMEASURES<br>• COORDINATED JOINT TBMD<br>• INITIAL PRESENCE/ DETERRENCE ADEQUATE FOR BOTH MRCs | • PREFERRED WEAPON INVENTORY AVAILABILITY<br>• PROTECTION OF SEALIFT ASSETS<br>• STRATEGIC AIR AND SEALIFT AVAILABILITY |
| 2 TUE AM | • MINE DETECTION<br>• BROAD AREA SEARCH<br>• NATIONAL ASSET AVAILABILITY FOR 2 MRCs | • CLOSE SUPPORT VS ATTRITION STRIKES<br>• AIRCRAFT SENSORS TO SUPPORT STAND-OFF WEPS<br>• PENETRATION OF ENEMY DEFENSES BY STRIKE PLATFORMS (JAMMING VS STEALTH VS STANDOFF) | • MISSILE DEFENSE - SEA SKIMMING CM AND WMD<br>• TACTICAL RECON - UAV AND OTHER OPTIONS<br>• SHALLOW WATER ASW/ ANTI-DIESEL WARFARE | • IN-THEATER REPAIR<br>• MEDIUM LIFT CAPABILITY<br>• STRATEGIC AIR AND SEALIFT AVAILABILITY |
| 3 TUE PM | • COMBAT ID<br>• CJTF/JFACC AFLOAT AND TRANSITION ASHORE<br>• C4I LOGISTICS INTEROPERABILITY | • NSFS MIX OF SYSTEMS<br>• LEVEL OF EFFORT WEAPONS IN CLOSE AIR SUPPORT<br>• ESTABLISHMENT OF EAF | • COMMON MISSION PLANNING<br>• SMALL BOAT THREAT<br>• POST MRC-1 PRESENCE/ DETERRENCE FORCES | • PREFERRED WEAPONS INVENTORY AVAILABILITY<br>• SEA-BASED LOGISTICS CAPABILITY<br>• AMPHIBIOUS ASSAULT FOLLOW-ON ESCHELON (AFOE) |
| 4 WED AM | • PEACETIME INTELLIGENCE DATABASES<br>• C2W/SURVEILLANCE EXPLOITATION POST-WAR<br>• COMMON DATA ARCHITECTURE USN/USMC & JOINT | • CV VERSUS AMPHIB BIG DECK FOR POST WAR<br>• POST-WAR AVIATION SUPPORT (POST NEF)<br>• POST-WAR MONITORING - WHAT SYSTEMS? MID RANGE UAV? | • SURFACE FORCE COMBATANT NUMBERS VERSUS 2 MRC REQUIREMENTS<br>• WMD DECON & ENVIRONMENTAL CLEANUP<br>• POST MRC-2 PRESENCE/ DETERRENCE FORCES | • MPS REGENERATION<br>• REGENERATION OF WEAPONS INVENTORY<br>• WAR RESERVE REGENERATION |

# APPENDIX B

## FLAG-LEVEL PARTICIPANTS

## APPENDIX B

### FLAG-LEVEL PARTICIPANTS
(in alphabetical order)

RADM (Sel) Tim Beard
RADM Brent M. Bennitt
MAJ GEN Richard Betherum, USAF
RADM Lyle G. Bien
RADM Bruce A. Black
RADM Donald V. Boecker
RADM Michael W. Bordy
MAJGEN James A. Brabham
RADM Herbert A. Browne, Jr.
RADM Richard A. Buchanan
RADM Philip J. Coady, Jr.
RADM Dennis R. Conley
RADM Robert C. Crates
Honorable John Dalton
RADM George W. Davis, VI
RADM Walter J. Davis, Jr.
RADM Philip A. Dur
RADM William A. Earner, Jr.
LTGEN Norman E. Ehlert
MGEN John C. Ellerson, USA
RADM Robert L. Ellis
RADM George W. Emery
MAJGEN Paul A. Fratarangelo
BGEN Carlton W. Fulford
RADM Harold W. Gehman, Jr.
RADM David M. Goebel
RADM Fred P. Gustavson
RADM Thomas F. Hall
RADM William J. Hancock
LTGEN Richard D. Hearney
Honorable Steven S. Honigman
RADM William P. Houley
MAJGEN Harry W. Jenkins, Jr.
LTGEN Robert B. Johnston
RADM Wesley E. Jordan, Jr.
BGEN George Karamarkovich
ADM Frank B. Kelso II
VADM Michael P. Kalleres
LTGEN Charles C. Krulak
RADM Katherine L. Laughton
VADM Anthony A. Less
RADM Frederick L. Lewis
VADM Stephen F. Loftus
VADM Thomas J. Lopez
RADM Thomas F. Marfiak
RADM Larry P. Marsh
ADM Henry H. Mauz, Jr.
RADM David R. Morris
GEN Carl E. Mundy
RADM John T. Natter
RADM Leonard N. Oden
RADM Daniel T. Oliver
MAJGEN Jeffrey W. Oster
RADM John F. Paddock, Jr.
RADM Paul W. Parcells
MAJGEN Richard L. Phillips
RADM Donald L. Pilling
RADM James G. Prout, III
VADM J. Paul Reason
RADM Rodney P. Rempt
MAJGEN David A. Richwine
BGEN Michael D. Ryan
RADM Thomas D. Ryan
RADM Ray R. Sareeram
Honorable Nora Slatkin
VADM Leighton W. Smith, Jr.
VADM Robert J. Spane
BGEN Martin R. Steele
RADM Robert Sutton
LTGEN Robert A. Tiebout
MGEN Paul K. Van Riper
BGEN Thomas L. Wilkerson
Dr. Robert S. Wood
MAJGEN Anthony C. Zinni
VADM Ronald J. Zlatoper

# APPENDIX C

## SCENARIO TIME LINE

# TIME LINE

| | DAY | EVENT | |
|---|---|---|---|
| | 1 | DPRK mobilizes | |
| | 2 | NCA recognizes possible US involvement in Korea | |
| KOREA Phase I | 4 | CINCPAC commences flexible deterrent options | |
| | 9 | Korea C-Day, M-Day | |
| | 10 | DPRK attacks ROK — D-Day | |
| | 24 | DPRK attack halted | |
| Phase II | 45 | Iraq mobilizes | |
| | 46 | NCA recognizes possible US involvement in SWA | |
| | 48 | CINCCENT commences flexible deterrent options | SWA Phase I |
| | 54 | Iraq C-Day | |
| Phase III | 71 | Iraq attacks Kuwait/Saudi Arabia — D-Day | |
| | 75 | Counter-attack in Korea commences | |
| | 76 | Iraq attack halted | |
| Phase IV | 105 | DPRK surrenders | Phase II |
| | 120 | Counter-attack in SWA commences | Phase III |
| | 140 | Iraq surrenders | Phase IV |

**Key:**
**C-Day = Deployment Operation Day**
**D-Day = Operation Commencement Day**
**M-Day = Mobilization Commencement Day**
**NCA = National Command Authority**
**SWA = Southwest Asia**

APPENDIX C

# APPENDIX D

# GLOSSARY

## APPENDIX D

## GLOSSARY[1]

| | | |
|---|---|---|
| AAAV | - | ADVANCED AMPHIBIOUS ASSAULT VEHICLE |
| AAW | - | ANTI-AIR WARFARE |
| ABFC | - | ADVANCED BASED FUNCTIONAL COMPONENT |
| ACC | - | U.S. AIR FORCE AIR COMBAT COMMAND |
| ACE | - | AIR COMBAT ELEMENT |
| ACF | - | AIR CONTINGENCY FORCE |
| ADCAP | - | ADVANCED CAPABILITY |
| ADC(X) | - | AUXILIARY DRY CARGO SHIP |
| AE | - | AUXILIARY AMMUNITION SHIP |
| AEGIS | - | ANTI-AIR WARFARE WEAPONS SYSTEM |
| AESA | - | ACTIVE ELECTRONICALLY-SCANNED ARRAY |
| AFOE | - | ASSAULT FOLLOW-ON ECHELON |
| AFP | - | ADAPTIVE FORCE PACKAGE |
| AFX | - | FUTURE STRIKE FIGHTER |
| AGS | - | ARMORED GUN SYSTEM |
| AHIP | - | ARMY HELICOPTER IMPROVEMENT PROGRAM (OH-58D) |
| AJ | - | ANTI-JAM |
| ALFS | - | AIRBORNE LOW FREQUENCY SONAR |
| ALMDS | - | AIRBORNE LASER MINE DETECTION SYSTEM |
| AMCM | - | AIRBORNE MINE COUNTERMEASURES |
| AMRAAM | - | ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILES |
| AOA | - | AMPHIBIOUS OPERATING AREA |
| AOR | - | AUXILIARY REPLENISHMENT OILER |
| APOD | - | AIRPORT OF DEBARKATION |
| APGM | - | AUTONOMOUS PRECISION-GUIDED MUNITION |
| ARC-210 | - | AIRBORNE MULTI-MODE SECURE VHF/UHF TRANSCEIVER |
| ARCENT | - | ARMY COMPONENT COMMAND, USCINCENT |
| ARS | - | AERIAL RECONNAISSANCE AND SURVEILLANCE |
| ASCM | - | ANTI-SHIP CRUISE MISSILE |
| ASDS | - | ADVANCED SEAL DELIVERY SYSTEM |
| ASM | - | ANTI-SHIP MISSILE |
| ASPJ | - | AIRBORNE SELF-PROTECTION JAMMER |
| ASUW | - | ANTI-SURFACE WARFARE |
| ASW | - | ANTI-SUBMARINE WARFARE |
| ATACMS | - | ARMY TACTICAL MISSILE SYSTEM |
| ATARS | - | ADVANCED TACTICAL AIR RECONNAISSANCE SYSTEM |
| ATAS | - | ADVANCED TARGET ACQUISITION SYSTEM |
| ATBM | - | ANTI-TACTICAL BALLISTIC MISSILE |
| ATCCS | - | ARMY TACTICAL COMMAND AND CONTROL SYSTEM |
| ATHS | - | AUTOMATIC TARGET HANDOFF SYSTEM |
| ATO | - | AIR TASKING ORDER |
| ATD | - | ADVANCED TECHNOLOGY DEMONSTRATION |

[1] Acronyms contained in this glossary are used in this or previous quicklook reports from this game series.

| | | |
|---|---|---|
| AV-8 | - | V/STOL ATTACK FIGHTER |
| AVCAL | - | AVIATION CONSOLIDATED ALLOWANCE LIST |
| AWACS | - | AIRBORNE WARNING AND CONTROL SYSTEM |
| BAM | - | BASELINE ASSESSMENT MEMORANDUM |
| BCIS | - | BATTLEFIELD COMBAT IDENTIFICATION SYSTEM |
| BDA | - | BATTLE (OR BOMB) DAMAGE ASSESSMENT |
| BGPHES | - | BATTLE GROUP PASSIVE HORIZON EXTENSION SYSTEM |
| BMDO | - | BALLISTIC MISSILE DEFENSE ORGANIZATION |
| BUR | - | BOTTOM-UP REVIEW |
| $C^2$ | - | COMMAND AND CONTROL |
| $C^2S$ | - | COMMAND, CONTROL AND SURVEILLANCE |
| $C^2W$ | - | COMMAND AND CONTROL WARFARE |
| $C^3/I^2$ | - | COMMAND, CONTROL, AND COMMUNICATIONS/INTELLIGENCE AND INFORMATION |
| $C^4/I^2$ | - | COMMAND, CONTROL, COMPUTERS AND COMMUNICATIONS/INTELLIGENCE AND INFORMATION |
| CAI | - | COOPERATIVE AIRCRAFT ID |
| CAS | - | CLOSE AIR SUPPORT |
| CASREP | - | CASUALTY REPORT |
| CCM | - | COASTAL CRUISE MISSILE |
| CB | - | CONSTRUCTION BATTALION |
| CEC | - | COOPERATIVE ENGAGEMENT CAPABILITY |
| C-FAST | - | COUNTER-FORCE AUTOMATED SURVEILLANCE AND TARGETING |
| CHBDL | - | COMMON HIGH BAND DATA LINK |
| CINCUNC/CFC | | COMMANDER IN CHIEF, UNITED NATIONS COMMAND/ COMBINED FORCES COMMAND |
| CJTF | - | COMMANDER JOINT TASK FORCE |
| CLF | - | COMBAT LOGISTICS FORCE |
| COEA | - | COST AND OPERATIONAL EFFECTIVENESS ANALYSIS |
| CONUS | - | CONTINENTAL UNITED STATES |
| CORT | - | COHERENT RECEIVE/TRANSMIT TRANSCEIVER |
| COSAL | - | CONSOLIDATED SHIP'S ALLOWANCE LIST |
| CRAF | - | CIVIL RESERVE AIR FLEET |
| CSAR | - | COMBAT SEARCH AND RESCUE |
| CSS | - | COMBAT SERVICE SUPPORT |
| CTAPS | - | CONTINGENCY TACS AUTOMATED PLANNING SYSTEM |
| CV(N) | - | AIRCRAFT CARRIER (NUCLEAR) |
| CVBG | - | AIRCRAFT CARRIER BATTLE GROUP |
| CV(R) | - | RESERVE AIRCRAFT CARRIER |
| CVW | - | CARRIER AIRWING |
| CVW(R) | - | RESERVE CARRIER AIRWING |
| DALS | - | DOWNED AIRCREW LOCATOR SYSTEM |
| DAMA | - | DEMAND ASSIGNED MULTIPLE ACCESS |
| DDG | - | GUIDED MISSILE DESTROYER |
| DDS | - | DRY DOCK SHELTER |
| DMA | - | DEFENSE MAPPING AGENCY |
| DON | - | DEPARTMENT OF THE NAVY |
| DPG | - | DEFENSE PLANNING GUIDANCE |
| DPRK | - | DEMOCRATIC PEOPLES' REPUBLIC OF KOREA (NORTH KOREA) |

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| E-2 | - | EARLY WARNING AIRCRAFT |
| EA-6 | - | COMBAT ELECTRONIC WARFARE AIRCRAFT |
| EAF | - | EXPEDITIONARY AIR FIELD |
| ECM | - | ELECTRONIC COUNTERMEASURES |
| EDM | - | ENGINEERING DEVELOPMENT MODEL |
| EHF | - | EXTREMELY-HIGH FREQUENCY (radio) |
| ELCAS | - | ELEVATED CAUSEWAY SYSTEM |
| ELINT | - | ELECTRONIC INTELLIGENCE |
| EOD | - | EMERGENCY ORDNANCE DISPOSAL |
| EO/LOROPS | - | ELECTRO-OPTICAL/LONG-RANGE OBLIQUE PHOTOGRAPHY SYSTEM |
| EP-3 | - | ELECTRONIC MARITIME PATROL AIRCRAFT |
| ES-3 | - | ELECTRONIC ANTISUBMARINE AIRCRAFT |
| ESM | - | ELECTRONIC SURVEILLANCE MEASURES |
| ETC | - | ELECTRO-THERMAL-CHEMICAL |
| EW | - | ELECTRONIC WARFARE |
| F-14 | - | FIGHTER AIRCRAFT |
| F/A-18 | - | STRIKE FIGHTER AIRCRAFT |
| FEWS | - | FOLLOW-ON EARLY WARNING SYSTEM |
| FFG | - | GUIDED-MISSILE FRIGATE |
| FIE | - | FLY IN ECHELON |
| FIRES | - | FIRE SUPPORT |
| FLIR | - | FORWARD-LOOKING INFRARED |
| FMOCC | - | FLEET MOBILE OPERATIONS COMMAND CENTER |
| FSS | - | FAST SEALIFT SHIP |
| FTI | - | FIXED TARGET INDICATOR |
| FYDP | - | FIVE (FUTURE) YEAR DEFENSE PLAN |
| GCC | - | GULF COOPERATION COUNCIL |
| GCE | - | GROUND COMBAT ELEMENT |
| GOO | - | GULF OF OMAN |
| GPALS | - | GLOBAL PROTECTION AGAINST LIMITED STRIKES |
| GPS | - | GLOBAL POSITIONING SYSTEM |
| HM | - | HELICOPTER MINESWEEPERS |
| HONA | - | HEALTH OF NAVAL AVIATION |
| HONS | - | HEALTH OF NAVAL SHIPS |
| HQ | - | HEADQUARTERS |
| HUMINT | - | HUMAN INTELLIGENCE |
| I&W | - | INDICATIONS AND WARNING |
| IADS | - | INTEGRATED AIR DEFENSE SYSTEM |
| IBR | - | INVESTMENT BALANCE REVIEW |
| IDECM | - | INTEGRATED DEFENSIVE ELECTRONIC COUNTERMEASURE |
| IMA | - | INTERMEDIATE MAINTENANCE ACTIVITY |
| IMINT | - | IMAGE INTELLIGENCE |
| IMP | - | INTEGRATED MISSION PLANNING |
| IRCM | - | INFRARED COUNTERMEASURES |
| ISAR | - | IMAGING SYNTHETIC APERTURE RADAR |
| ISO | - | INTERNATIONAL STANDARDS ORGANIZATION (STANDARDIZED CONTAINERS) |
| JADO/JEZ | - | JOINT AIR DEFENSE OPS/JOINT ENGAGEMENT ZONE |
| JAPNMS | - | JTIDS AIR PLATFORM NETWORK MANAGEMENT SYSTEM |

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| JAST | - | JOINT AIR STRIKE TECHNOLOGY |
| JAWS | - | JOINT ANTI-TANK WEAPONS SYSTEM |
| JCALS | - | JOINT CALS |
| JDAM | - | JOINT DIRECT ATTACK MUNITION |
| JFACC | - | JOINT FORCE AIR COMPONENT COMMANDER |
| JFCC | - | JOINT FORCE COMMAND CENTER (SHIP) |
| JIC | - | JOINT INTELLIGENCE CENTER |
| JMA | - | JOINT MISSION AREA |
| JMCIS | - | JOINT MARITIME COMMAND INFORMATION SYSTEM |
| JSIPS | - | JOINT SERVICE IMAGERY PROCESSING SYSTEM |
| JSOW | - | JOINT STAND-OFF WEAPON |
| JSTARS | - | JOINT SURVEILLANCE TARGET ATTACK RADAR SYSTEM |
| JTF | - | JOINT TASK FORCE |
| JTIDS | - | JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM |
| KC-130 | - | REFUELING TANKER AIRCRAFT |
| KC135 | - | REFUELING TANKER AIRCRAFT |
| LCAC | - | AMPHIBIOUS LANDING CRAFT, AIR CUSHIONED |
| LCC | - | AMPHIBIOUS COMMAND SHIP |
| LF | - | LANDING FORCE |
| LF | - | LOW FREQUENCY |
| LHA | - | AMPHIBIOUS ASSAULT SHIP |
| LHD | - | AMPHIBIOUS HELICOPTER/DOCK LANDING SHIP |
| LIDAR | - | LASER IMAGE DETECTION AND RANGING |
| LKA | - | AMPHIBIOUS CARGO SHIP |
| LOTS | - | LOGISTICS OVER THE SHORE |
| LSD | - | AMPHIBIOUS DOCK LANDING SHIP |
| LMSR | - | LARGE, MEDIUM SPEED RO/RO |
| LOTS | - | LOGISTICS OVER THE SHORE |
| LPI | - | LOW PROBABILITY OF INTERCEPT |
| LST | - | AMPHIBIOUS TANK LANDING SHIP |
| LTF | - | LOGISTICS TASK FORCE |
| LX | - | FUTURE AMPHIBIOUS LANDING SHIP |
| MAGTF | - | MARINE AIR GROUND TASK FORCE |
| MAW | - | MARINE AIR WING |
| MBT | - | MAIN BATTLE TANK |
| MCAC | - | MULTI-MISSION CRAFT, AIR CUSHIONED |
| MCM | - | MINE COUNTERMEASURES |
| MCS | - | MINE COMMAND SHIP |
| MEB | - | MARINE EXPEDITIONARY BRIGADE |
| MEF | - | MARINE EXPEDITIONARY FORCE |
| MEU/SOC CAPABLE | - | MARINE EXPEDITIONARY UNIT/SPECIAL OPERATIONS |
| MHM | - | MINE HUNTING SHIP |
| MIDS | - | MULTI-FUNCTION INFORMATION DISTRIBUTION SYSTEM |
| MLA | - | MEDIUM LIFT ALTERNATIVE |
| MILSTAR | - | MILITARY STRATEGIC TACTICAL AND RELAY advanced communications satellite program |
| MLR | - | MEDIUM LIFT REPLACEMENT |
| MLRS | - | MULTIPLE-LAUNCH ROCKET SYSTEM |
| MMW | - | MILLIMETER WAVE |

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| MOPP | - | MISSION-ORIENTED PROTECTIVE POSTURE |
| MPF | - | MARITIME PREPOSITIONING FORCE |
| MPN | - | MILITARY PERSONNEL, NAVY |
| MPS | - | MARITIME PREPOSITIONING SHIPS |
| MRC | - | MAJOR REGIONAL CONTINGENCY |
| MRS | - | MOBILITY REQUIREMENTS STUDY |
| MSC | - | MILITARY SEALIFT COMMAND |
| MTACCS | - | MARINE TACTICAL COMMAND AND CONTROL SYSTEM |
| MTACCs | - | US AIR FORCE'S TACTICAL AIR CONTROL CENTER'S PROGRAM |
| MV-22 | - | MARINE VERTICAL TAKE-OFF AIRCRAFT |
| NBC | - | NUCLEAR, BIOLOGICAL, CHEMICAL |
| NCA | - | NATIONAL COMMAND AUTHORITY |
| NEF | - | NAVAL EXPEDITIONARY FORCE |
| NETF | - | NAVAL EXPEDITIONARY TASK FORCE |
| NETG | - | NAVAL EXPEDITIONARY TASK GROUP |
| NGFS | - | NAVAL GUNFIRE SUPPORT |
| NMCB | - | NAVAL MOBILE CONSTRUCTION BATTALION |
| NSFS | - | NAVAL SURFACE FIRE SUPPORT |
| NTCS-A | - | NAVY TACTICAL COMMAND SYSTEM - AFLOAT |
| NVG | - | NIGHT VISION GOGGLES |
| OMFTS | - | OPERATIONAL MANEUVER FROM THE SEA |
| OPEVAL | - | OPERATIONAL EVALUATION |
| OPLAN | - | OPERATIONAL PLAN |
| OPTEMPO | - | OPERATIONAL TEMPO (SHIP TURN-AROUND RATIO) |
| OTH | - | OVER-THE-HORIZON |
| P-3 | - | MARITIME PATROL AIRCRAFT |
| PAA | - | PRIMARY AIRCRAFT AUTHORIZED |
| PATRIOT | - | SURFACE-TO-AIR MISSILE |
| PC | - | PATROL CRAFT |
| PERSTEMPO | - | PERSONNEL TEMPO (PERSONNEL DEPLOYMENT TURN-AROUND RATIO) |
| PG | - | PERSIAN GULF |
| PGM | - | PRECISION-GUIDED MUNITIONS |
| PIPE | - | SLANG TERM FOR COMMUNICATION SYSTEM RECEIVE/ TRANSMIT CAPACITY |
| PLRS | - | POSITION LOCATION REPORTING SYSTEM |
| POM | - | PROGRAM OBJECTIVE MEMORANDUM (EVEN YEAR BUDGET SUBMISSION) |
| POW | - | PRISONER OF WAR |
| PPBS | - | PLANNING, PROGRAMMING & BUDGETING SYSTEM |
| PR | - | PROGRAM REVIEW (ODD YEARS BUDGET SUBMISSION) |
| R&D | - | RESEARCH AND DEVELOPMENT |
| RAD | - | RESOURCE ALLOCATION DISPLAY |
| RAM | - | ROLLING AIRFRAME MISSILE |
| RC-135 | - | RECONNAISSANCE AIRCRAFT |
| RECON | - | RECONNAISSANCE |
| ROE | - | RULES OF ENGAGEMENT |
| ROK | - | REPUBLIC OF KOREA (SOUTH KOREA) |
| RO/RO | - | ROLL-ON/ROLL-OFF CARGO SHIP |

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| ROS | - | REDUCED OPERATING STATUS |
| RPV | - | REMOTELY PILOTED VEHICLE |
| RRF | - | READY RESERVE FORCE |
| S-3 | - | ANTISUBMARINE AIRCRAFT |
| SA | - | SUPPORT AREA |
| SAM | - | SELF-PROPELLED, ACOUSTIC, MAGNETIC (sweep device) |
| SAM | - | SURFACE-TO-AIR MISSILE |
| SAP | - | SPECIAL ACCESS PROGRAM (BLACK) |
| SAR | - | SYNTHETIC APERTURE RADAR or SEARCH AND RESCUE |
| SAS | - | SMART ARMOR SYSTEM |
| SATCOM | - | UHF SATELLITE COMMUNICATIONS |
| SDIO | - | STRATEGIC DEFENSE INITIATIVE ORGANIZATION |
| SEAD | - | SUPPRESSION OF ENEMY AIR DEFENSES |
| SELRES | - | SELECTED RESERVES |
| SEW | - | SPACE AND ELECTRONIC WARFARE |
| SHF | - | SUPER-HIGH FREQUENCY |
| SIGINT | - | SIGNAL INTELLIGENCE |
| SINCGARS | - | SINGLE CHANNEL GROUND AND AIRBORNE RADIO SYSTEM |
| SLOC | - | SEA-LINE OF COMMUNICATION |
| SM | - | STANDARD MISSILE |
| SMAW | - | SHOULDER-LAUNCHED MULTIPURPOSE ASSAULT WEAPON |
| SOF | - | SPECIAL OPERATIONS FORCES |
| SOH | - | STRAIT OF HORMUZ |
| SPMAGTF | - | SPECIAL MARINE AIR GROUND TASK FORCE |
| SPOD | - | SEAPORT OF DEBARKATION |
| SRP | - | SEALIFT READINESS PROGRAM |
| SSCM | - | SURFACE-TO-SURFACE CRUISE MISSILE |
| SSK | - | DIESEL-POWERED ATTACK SUBMARINE |
| SSM | - | SURFACE-TO-SURFACE MISSILE |
| SSN | - | NUCLEAR ATTACK SUBMARINE |
| SSTD | - | SURFACE SHIP TORPEDO DEFENSE |
| STS | - | SHIP-TO-SHORE |
| SWA | - | SOUTHWEST ASIA |
| TACAIR | - | TACTICAL AIRCRAFT |
| TACC | - | TACTICAL AIR CONTROL CENTER |
| TACS | - | TACTICAL AIR CONTROL SYSTEM |
| TADIL-A | - | LINK 11 |
| TADIL-C | - | LINK 4 |
| TADIL-J | - | LINK 16 |
| T-AFS | - | MILITARY SEALIFT COMMAND COMBAT STORES SHIP |
| T-AH | - | MILITARY SEALIFT COMMAND HOSPITAL SHIP |
| T-AO | - | MILITARY SEALIFT REPLENISHMENT OILER |
| TARPS | - | TACTICAL AIR RECONNAISSANCE POD SYSTEM |
| T-AVB | - | MILITARY SEALIFT COMMAND AIRCRAFT MAINTENANCE SHIP |
| TBIP | - | TOMAHAWK BASELINE IMPROVEMENT PROGRAM |
| TBM | - | THEATER BALLISTIC MISSILE |
| TBMD | - | TACTICAL BALLISTIC MISSILE DEFENSE |
| TERPES | - | TACTICAL ELECTRONIC RECONNAISSANCE PROCESSING AND EVALUATION |
| TFW | - | TACTICAL FIGHTER WING |

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| THAAD | - | THEATER HIGH-ALTITUDE AREA DEFENSE |
| TLAM | - | TOMAHAWK LAND ATTACK MISSILE |
| TLAM-N | - | NUCLEAR TOMAHAWK LAND ATTACK MISSILE |
| TOW | - | TUBE-LAUNCHED, OPTICALLY-TRACKED, WIRE-GUIDED MISSILE |
| TRADOC | - | TRAINING AND DOCTRINE COMMAND |
| TRSS | - | TACTICAL REMOTE SENSOR SYSTEM (USMC) |
| TSSAM | - | TRI-SERVICE STANDOFF ATTACK MISSILE |
| UAV | - | UNMANNED AERIAL VEHICLE |
| UHF | - | ULTRA-HIGH FREQUENCY |
| USCINCCENT- | | COMMANDER IN CHIEF, U.S. CENTRAL COMMAND |
| UUV | - | UNMANNED UNDERWATER VEHICLES |
| VERTREP | - | VERTICAL REPLENISHMENT OPERATIONS |
| VLS | - | VERTICAL LAUNCH SYSTEM |
| V/STOL | - | VERTICAL/SHORT TAKE-OFF AND LANDING |
| WMD | - | WEAPONS OF MASS DESTRUCTION |